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PUBLICATIONS LIST

1. *Variation du coefficient d'émission électronique secondaire en fonction de l'angle d'incidence pour la face (001) du cuivre bombardée par des électrons de moyenne énergie (700-3000 eV)*
A.M. Baró, M. Salmeron and F. Pradal.
C.R. Acad. Sc. Paris. B 270, 1160 (1970).
2. *Realisation d'un montage experimental pour l'étude de l'anisotropie de l'émission électronique secondaire de cibles monocristallines sous bombardement électronique*
A.M. Baró, M. Salmeron, and F. Pradal.
Anales de Física 67, 401 (1971).
3. *Montage experimental pour l'obtention du spectre d'émission électronique secondaire de métaux et semiconducteurs*
M. Salmeron, A.M. Baró and F. Pradal.
Anales de Física. 67, 405 (1971).
4. *Secondary electron emission rocking curve from copper*
A.M. Baró and M. Salmeron.
Physica Status Solidi (b). 49, K135 (1972).
5. *Experimental observation of chemical shifts in Auger spectrum from surface layers of SiO₂ during electron bombardment*
M. Salmeron and A.M. Baró.
Surf. Sci. 29, 300 (1972).
6. *Enhanced plasmon excitation in electron impact ionization processes in Si and Mg*
M. Salmeron, A.M. Baró and J.M. Rojo.
Solid State Comm. 13, 1869 (1973).
7. *Plasmon Satellite structure in the ionization peak of Si and Mg associated to coupling between inner levels and the Fermi sea*
M. Salmeron, A.M. Baró and J.M. Rojo.
Proc. 3rd Natl. Vacuum Meeting and Intl. Conference on Surface Phenomena, Madrid, Spain, September 24-29, 1973.
Electrónica y Física Aplicada. 17, 157 (1974).
8. *A study of the intensity of the L₂₃VV Auger transition in Mg and Si from the cross-section model of Gryzinski*
A.M. Baró and M. Salmeron.
Proc. 3rd Natl. Vacuum Meeting and Intl. Conference on Surface Phenomena, Madrid, Spain, September 24-29, 1973.
Electrónica y Física Aplicada. 17, (1-2) 166 (1974).
9. *High energy satellites in Auger peaks of Mg and Si*
M. Salmeron, A.M. Baró and J.M. Rojo.

- Surf. Sci.** 41, 11 (1974).
10. *On the high energy satellites of the M_{1,2}VV Auger peaks of copper*
M. Salmeron.
Surf. Sci. 41, 584 (1974).
11. *Interatomic Auger transitions in some adsorbates on transition metals*
M. Salmeron and A.M. Baró.
Surf. Sci. 49, 356 (1975).
12. *The MVV Auger spectrum of copper and nickel*
A.M. Baró, M. Salmeron, and J.M. Rojo.
J. Phys. F: Metal Phys. 5, 826 (1975).
13. *Interatomic Auger processes and the density of states*
M. Salmeron, A.M. Baró and J.M. Rojo.
Conf. on Surface Physics. Warwick, 1975.
Surf. Sci. 53, 689 (1975).
14. *The L₁L_{2,3}V Auger transition in Si*
S. Ferrer, A.M. Baró and M. Salmeron.
Solid State Comm. 16, 651 (1975).
15. *Interatomic transitions and relaxation effects in Auger spectra of several gas adsorbates on transition metals*
M. Salmeron, J.M. Rojo and A.M. Baró.
Phys. Rev. B. 13, 4348 (1976).
16. *Response function of velocity analyzers*
C. Palacio, M. Salmeron, and J.M. Martínez-Duart.
J. Phys. E: Sci. Instrs. 10, 61 (1977).
17. *Surface characterization of ceramic materials* (review paper)
G.A. Somorjai and M. Salmeron.
Ceramic Microstructures, eds. R.M. Fulrath and J.A. Pask, pp. 101-108. Westview Press, Boulder, Colorado, 1977.
18. *Variation of surface reaction probability with reactant angle of incidence: A molecular beam study of the asymmetry of stepped platinum crystal surfaces for H-H bond breaking*
R.J. Gale, M. Salmeron, and G.A. Somorjai.
Phys. Rev. Lett. 38, 1027 (1977).
19. *Molecular beam study of the H₂-D₂ exchange reaction on stepped platinum crystal surfaces: Dependence on reactant angle of incidence*
M. Salmeron, R.J. Gale and G.A. Somorjai.
J. Chem. Phys. 67, 5324 (1977).
20. *Obtaining density of states information from self-deconvolution of Auger band-type spectra*
J.A. Tagle, V. Martínez Sáez, J.M. Rojo and M. Salmeron.
Surf. Sci. 79, 77 (1978).

21. *A modulated molecular beam study of the mechanism of the $H_2D_2 = 2HD$ reaction on Pt(111) and Pt(332) crystal surfaces*
M. Salmeron, R.J. Gale and G.A. Somorjai.
J. Chem. Phys. 70, 2807 (1979).
22. *Ciencia de superficies y sus aplicaciones a la industria* (Review Paper)
J.M. Rojo and M. Salmeron.
Afinidad. 364, 459 (1979).
23. *A LEED-Auger study of the reconstructed Pt(110) surface and the effect of oxygen treatment*
M. Salmeron and G.A. Somorjai.
Surf. Sci. 91, 373 (1980).
24. *A charge density wave model for reconstructed monolayers of Co on Cu (100)*
S. Ferrer, L. González, M. Salmeron, J.A. Vergés and F. Yndurain.
Solid State Comm. 38, 317 (1980).
25. *Influence of argon bombardment on the reactivity of (110) platinum with oxygen*
R. Miranda, J. Ibañez, M. Salmeron and J.M. Rojo.
J. Chem. Phys. 72, 6614 (1980).
26. *Enhancement of oxidation on Ni(001) surface bombarded with argon ions*
R. Miranda, J.M. Rojo, and M. Salmeron.
Solid State Comm. 35, 83 (1980).
27. *LEED/Auger study of the monolayer growth of Co on Cu (100) and its oxidation*
L. González, R. Miranda, M. Salmeron, J.A. Vergés, and F. Ynduráin.
Proc. 3rd European Conf. on Surface Science, Cannes, France, 1980.
Le Vide. 201, 229 (1980).
28. *Ion bombardment induced variation of reactivity of several gas-metal systems*
R. Miranda, J.M. Rojo, M. Salmeron, and J. Ibañez.
Proc. 3rd European Conf. on Surface Science, Cannes, France, 1980.
Le Vide 201, 415 (1980).
29. *The influence of ion irradiation on surface reactivity*
R. Miranda , J.M. Rojo, and M. Salmeron.
J. Vac. Sci. Technol. 18, 596 (1981).
30. *Oxygen induced dissolution and segregation of silicon in platinum single crystals*
M. Salmeron and G.A. Somorjai.
J. Vac. Sci. Technol. 19, 722 (1981).
31. *Adsorption and bonding of butane and pentane on Pt(111) crystal surfaces. Effects of oxygen treatments and deuterium preadsorption*
M. Salmeron and G.A. Somorjai.
J. Phys. Chem. 85, 3835 (1981).
32. *The structure and stability of surface platinum oxide and of oxides of other noble metals*
M. Salmeron, L. Brewer and G.A. Somorjai.
Surf. Sci. 112, 207 (1981).

33. *Experimental and theoretical study of Co adsorbed at the surface of Cu: Reconstructions, charge density waves, surface magnetism and oxygen adsorption.*
 L. González, R. Miranda, M. Salmeron, J.A. Vergés and F. Ynduráin.
Phys. Rev. B. 24, 3245 (1981).
34. *Desorption, decomposition and deuterium exchange reactions of unsaturated hydrocarbons (ethylene, acetylene, propylene and butenes) on the Pt(111) crystal face*
 M. Salmeron and G.A. Somorjai.
J. Phys. Chem. 86, 341 (1982). LBNL-12857.
35. *The role of surface irregularities (steps, kinks) and point defects on the chemical reactivity of solid surfaces*
 S. Ferrer, J.M. Rojo, M. Salmeron and G.A. Somorjai.
Phil. Mag. 45, 261 (1982).
36. *The adsorption and binding of thiophene, butene and H₂S on the basal plane of MoS₂ single crystals*
 M. Salmeron, G.A. Somorjai, A. Wold, R. Chianelli and K.S. Liang.
Chem. Phys. Lett. 90, 105 (1982).
37. *LEED/Auger and TDS study of the structure and chemistry of sulfur overlayer on Mo(100)*
 M. Salmeron and G.A. Somorjai.
Surf. Sci. 126, 410 (1983).
38. *A LEED-AES study of the structure of sulfur monolayers on the Mo(100) crystal face*
 M. Salmeron, G.A. Somorjai, and R.R. Chianelli
Surf. Sci. 127, 526 (1983).
39. *Core and valence band energy level shifts in small two-dimensional islands of gold deposited on Pt(100): The effect of step-edge, surface and bulk atoms*
 M. Salmeron, S. Ferrer, M. Jazzar and G.A. Somorjai.
Phys. Rev. B. 28, 1158 (1983).
40. *Photoelectron-spectroscopy study of the electronic structure of Au and Ag overlayers on Pt(100), Pt(111) and Pt(997) surfaces*
 M. Salmeron, S. Ferrer, M. Jazzar and G.A. Somorjai.
Phys. Rev. B. 28, 6758 (1983).
41. *A thermal desorption study of thiophene adsorbed on the clean and sulfided Mo(100) crystal face*
 A.J. Gellman, M.H. Farias, M. Salmeron, and G.A. Somorjai.
Surf. Sci. 136, 217 (1984).
42. *CO-chemisorption on two-dimensional cobalt clusters: A surface science approach to cluster chemistry*
 F. Falo, I. Cano and M. Salmeron.
Surf. Sci. 143, 303 (1984).
43. *The adsorption and decomposition of water on Ni(110) studied by electron energy loss spectroscopy*
 L. Ollé, M. Salmeron, and A.M. Baró.
J. Vac. Sci. Technol. A. 3, (4), 1866 (1985).

44. *He scattering study of the nucleation and growth of Cu(100) from its vapor*
L.J. Gómez, S. Bourgeal, J. Ibañez and M. Salmeron.
Phys. Rev. B. 31, (4) 2551 (1985).
45. *Core level photoemission study of Au deposited on Pt(111) in the submonolayer range*
S. Ferrer, M. Salmeron, C. Ocal, P. Roubin and J. Lecante.
Surf. Sci. 160, L488 (1985).
46. *Formation of sulfhydryl (SH) species on the clean and (2x2)-S covered Pt(111) surface by H₂S decomposition*
R.J. Koestner, E.B. Kollin, M. Salmeron and J.L. Gland.
Chem. Phys. Lett. 125, 134 (1986).
47. *Adsorption and surface reactions of H₂S on clean and S-covered Pt(111)*
R.J. Koestner, M. Salmeron, E.B. Kollin and J.L. Gland.
Surf. Sci. 172, 668 (1986).
48. *Composition, morphology and mechanical properties of plasma assisted CVD TiN Films on M2 tool steel*
M.R. Hilton, L.R. Narasimhjan, S. Nakamura, M. Salmeron and G.A. Somorjai.
Thin Solid Films. 139, 247 (1986).
49. *The influence of TiO_x deposits on a polycrystalline Rh foil on CO adsorption and desorption*
M. Levin, M. Salmeron, A.T. Bell and G.A. Somorjai.
Surf. Sci. 169, 123 (1986). LBNL-19901
50. *Water adsorption on the (001) Plane of α-Fe₂O₃: An XPS, UPS, Auger, and TPD study*
M. Hendewerk, M. Salmeron and G.A. Somorjai.
Surf. Sci. 172, 544 (1986).
51. *The adsorption and reactions of hydrocarbons on molybdenum single crystal surfaces; when clean and in the presence of co-adsorbed sulfur or carbon*
D.G. Kelly, M. Salmeron and G.A. Somorjai.
Surf. Sci. 175, 465 (1986). LBNL-21251
52. *Studies of interfacial composition of TiN films formed by plasma assisted CVD using an in-situ scratching device*
M.R. Hilton, A.M. Middlebrook, G.. Rodrigues, M. Salmeron and G.A. Somorjai.
Proc. 13th Intl. Conf. on Metallurgical Coatings, San Diego, California, April 7-11, 1986.
J. Vac. Sci. Technol. A. 4, 2797 (1986).
53. *The effects of titania and alumina overlayers on the hydrogenation of CO over rhodium*
M.E. Levin, M. Salmeron, A.T. Bell and G.A. Somorjai.
Faraday Trans. I. 83, 2061 (1987).
54. *The enhancement of CO hydrogenation on rhodium by TiO_x overlayers*
M.E. Levin, M. Salmeron, A.T. Bell and G.A. Somorjai.
J. Catal. 106, 401 (1987).
55. *Scanning tunneling microscopy study of the Au(334) surface in air.*
M. Salmeron, B. Marchon, S. Ferrer and D.S. Kaufman.
Phys. Rev. B. 35, (6) 3036 (1987).

- 56.** *Structure and thermal stability of the Au(334) surface and Au(111) thin films in air: A scanning tunneling microscopy study*
 M. Salmeron, D.S. Kaufman, B. Marchon and S. Ferrer.
Appl. Surf. Sci. 28, 279 (1987). LBNL-25338
- 57.** *The surface topography of pyrolytic carbons and Au thin films by scanning tunneling microscopy: Grain boundaries and surface defects*
 B. Marchon, S. Ferrer, D.S. Kaufman, M. Salmeron and W. Siekhaus.
 Proc. 14th Intl. Conf. on Metallurgical Coatings, San Diego, California, March 23-28, 1987.
Thin Solid Films. 154, 65 (1987). LBNL-24010
- 58.** *TiN coatings on M2 steel produced by plasma-assisted CVD*
 M.R. Hilton, G.J. Vandentop, M. Salmeron and G.A. Somorjai.
 Proc. 14th Intl. Conf. on Metallurgical Coatings, San Diego, California, March 23-28, 1987.
Thin Solid Films. 154, 377 (1987).
- 59.** *Scanning tunneling microscopy: A new tool for surface studies in vacuum, liquid and air environments (review paper)*
 Proc. Asia Pacific Symposium on Surface Physics.
Surface Physics, ed. Xie Xide, pp.148-161. World Scientific Publishing Co., 1987.
- 60.** *Photoassisted catalytic dissociation of H₂O to produce hydrogen on partially reduced α-Fe₂O₃*
 M.M. Khader, G.H. Vurens, I.-K. Kim, M. Salmeron and G.A. Somorjai.
J. Am. Chem. Soc. 109, (12) 3581 (1987). LBNL-22380
- 61.** *Alumina and titania overlayers on rhodium: A comparison of the chemisorption and catalytic properties*
 M.E. Levin, K.J. Williams, M. Salmeron, A.T. Bell and G.A. Somorjai.
Surf. Sci. 195, 341 (1988). LBNL-23052
- 62.** *The characterization of Ti and Al oxide overlayers on rhodium and gold by XPS*
 M.E. Levin, M. Salmeron, A.T. Bell and G.A. Somorjai.
Surf. Sci. 195, 429 (1988).
- 63.** *The adsorption and co-adsorption of sulfur and carbon monoxide on rhenium single crystal surfaces*
 D.G. Kelly, A.J. Gellman, M. Salmeron, G.A. Somorjai, V. Maurice, M. Huber and J. Oudar.
Surf. Sci. 204, 1 (1988).
- 64.** *STM study of the Re(0001) surface passivated by half a monolayer of sulfur in an atmospheric environment*
 B. Marchon, D.F. Ogletree, M. Salmeron and W. Siekhaus.
 Proc. 2nd Intl. Conf. on STM, Oxnard, California, July 20-24, 1987.
J. Vac. Sci. Technol. A. 6, 531 (1988). LBNL-24148
- 65.** *Atomic arrangement of sulfur adatoms on Mo(001) at atmospheric pressure. A scanning tunneling microscopy study.*
 B. Marchon, P. Bernhardt, M.E. Bussell, G.A. Somorjai, M. Salmeron and W. Siekhaus.
Phys. Rev. Lett. 60, 1166 (1988). LBNL-24167
- 66.** *Structure, composition and chemisorption studies of thin ordered iron oxide films on Pt(111)*
 G.H. M. Salmeron and G.A. Somorjai.
Surf. Sci. 201, 129 (1988). LBNL-24328

- 67.** An ISS and AES study of alkali metal induced sintering of an iron oxide monolayer adsorbed on Pt(111).
G.H. Vurens, D.R. Strongin, M. Salmeron and G.A. Somorjai.
Surf. Sci. Lett. 199, L387 (1988).
- 68.** An ISS, AES and CO chemisorption study of titania overlayers on Rh(111).
K.J. Williams, M. Salmeron, A.T. Bell and G.A. Somorjai.
Surf. Sci. 204, L745 (1988).
- 69.** Carbon overcoat and the process dependence on its microstructure and wear characteristics.
M.R. Khan, N. Heiman, R.D. Fisher, S. Smith, M. Smallen, G.F. Hughes, K. Viers, B. Marchon, D.F. Ogletree, M. Salmeron and W. Siekhaus.
Proc. 4th Joint MMM-Intermag. Conf.
IEEE Trans. Magnetics. 24, 2647 (1988).
- 70.** The effect of argon during the plasma-assisted chemical vapor deposition of TiN
M.R. Hilton, M. Salmeron and G.A. Somorjai.
Thin Solid Films. 167, L31 (1988).
- 71.** Surface modifications by STM on a passivated Re(0001) surface
B. Marchon and M. Salmeron.
Proc. 15th Intl. Conf. on Metallurgical Coatings, San Diego, California, April 11-15, 1988.
Surf. and Coatings Tech. 36, 319 (1989). LBNL-24939
- 72.** Observation of graphitic and amorphous structures on the surface of hard carbon films by scanning tunneling microscopy
B. Marchon, M. Salmeron and W. Siekhaus.
Phys. Rev. B. 39, 12907 (1989).
- 73.** Espectroscopia de superficies: Utilización de técnicas modernas para la caracterización de su estructura y propiedades químicas (review paper)
M. Salmeron.
Nuevas Tendencias en Química Teórica. Estructura, Interacciones y Reactividad, Vol. 3.
Ed. Servicio de publicaciones del Consejo Superior de Investigaciones Científicas, Madrid, Spain, 1991.
- Published also in English as:
The use of modern techniques for the characterization of the structural and chemical properties of surfaces (review paper)
M. Salmeron.
Computational Chemistry: Structure, Interactions and Reactivity, Part B, ed. S. Fraga.
Elsevier Sci. Publishers, Amsterdam, The Netherlands, 1991. LBNL-25426
- 74.** Scanning tunneling microscopy (review paper)
M. Salmeron.
Emerging Techniques for Catalyst Characterization, ed. John Horsley, Chapter 5. Catalytica, Inc., Mountain View, California, 1989. LBNL-30768
- 75.** STM study of the structure of the sulfur 1x2 overlayer on Mo(001) in air: Ordered domains, phase boundaries and defects
B. Marchon, D.F. Ogletree, M.E. Bussell, G.A. Somorjai, M. Salmeron and W. Siekhaus.
Proc. 3th Intl. Conf. on STM, Oxford, England, July 4-8, 1988.
J. Microscopy. 152, 427 (1989). LBNL-25700

- 76.** *Surface characterization of metal oxide overlayers*
 K.J. Williams, M.E. Levin, M. Salmeron, A.T. Bell and G.A. Somorjai.
Characterization and Catalyst Development, eds. S.A. Bradley, M.J. Gattuso and R.J. Bertolacini, Chapter 17. ACS Symposium Series, Washington, D.C., 1989.
- 77.** *Direct observation of native DNA structures with the scanning tunneling microscope*
 T.P. Beebe, Jr., T.E. Wilson, D.F. Ogletree, J.E. Katz, R. Balhorn, M. Salmeron and W. Siekhaus.
Science. 243, 370 (1989). LBNL-26201
- 78.** *STM study of the structure of sulfur ($2\sqrt{3} \times 2\sqrt{3}$)R30 overlayer on Re(0001)*
 D.F. Ogletree, C. Ocal, B. Marchon, G.A. Somorjai, M. Salmeron, T. Beebe and W. Siekhaus.
 Proc. 4th Intl. Conf. on STM, Oarai, Japan, July 9-14, 1989.
J. Vac. Sci. Technol. A. 8, 297 (1990). LBNL-27563
- 79.** *Imaging of biomolecules with the scanning tunneling microscope: Problems and prospects*
 Proc. 4th Intl. Conf. on STM, Oarai, Japan, July 9-14, 1989.
 M. Salmeron, T. Beebe, J. Odriozola, T. Wilson, D.F. Ogletree and W. Siekhaus.
J. Vac. Sci. Technol. A. 8, 635 (1990). LBNL-27566
- 80.** *Formation of hydrogenated amorphous carbon films of controlled hardness from a methane plasma*
 G.J. Vandentop, M. Kawasaki, R.M. Nix, I.G. Brown, M. Salmeron and G.A. Somorjai.
Phys. Rev. B. 41, (5) 3200 (1990).
- 81.** *The preparation of thin ordered transition metal oxide films on metal single crystals for surface science studies (review paper)*
 G. Vurens, M. Salmeron and G.A. Somorjai.
Progress in Surf. Sci. 32, 333 (1990). LBNL-28696
- 82.** *Analysis of the interface of hydrogenated amorphous carbon films on silicon by angle-resolved - X-ray photoelectron spectroscopy*
 M. Kawasaki, G.J. Vandentop, M. Salmeron and G.A. Somorjai.
Surf. Sci. 227, 261 (1990). LBNL-27757
- 83.** *The epitaxial growth of zirconium oxide thin films on Pt(111) single crystal surfaces*
 V. Maurice, M. Salmeron and G.A. Somorjai.
Surf. Sci. 237, 116 (1990).
- 84.** *Hydrogenation of CO₂, Acetone and CO on a Rh foil promoted by titania overlayers*
 K.J. Williams, A.B. Boffa, J. Lahtinen, M. Salmeron, A.T. Bell and G.A. Somorjai.
Catalysis Lett. 5, 385 (1990). LBNL-29100
- 85.** *An ultra-high vacuum scanning tunneling microscope for surface science studies*
 D.M. Zeglinski, D.F. Ogletree, T.P. Beebe, R.Q. Hwang, G.A. Somorjai and M. Salmeron.
Rev. Sci. Instrum. 61, (12) 3769 (1990). LBNL-28848
- 86.** *The bonding of diethylether, ethanol and their fluorinated analogs to zirconium oxide thin films*
 V. Maurice, K. Takeuchi, M. Salmeron and G.A. Somorjai.
Surf. Sci. 250, 99 (1991). LBNL-29487
- 87.** *Observation of the initial stages of growth of hydrogenated amorphous carbon films by scanning tunneling microscopy*
 G. Vandentop, P.A.P. Nascente, M. Kawasaki, D.F. Ogletree, G.A. Somorjai and M. Salmeron.

- J. Vac. Sci. Technol. A.** 9, 2273 (1991).
88. *Preparation and characterization of amorphous SiC:H thin films*
M.P. Delplancke, J.M. Powers, G.J. Vandentop, M. Salmeron and G.A. Somorjai.
J. Vac. Sci. Technol. A. 9, (3) 450 (1991).
89. *Scanning tunneling microscopy study of TiO_x on Rh(111)*
H.-C. Wang, D.F. Ogletree and M. Salmeron.
Proc. 5th Intl. Conf. STM/Spectroscopy, Baltimore, Maryland, July 23-27, 1990.
J. Vac. Sci. Technol. B. 9, 853 (1991). LBNL-29713
90. *Scanning tunneling microscopy studies of sulfur overlayers on the Re(0001) surface*
D.F. Ogletree, R.Q. Hwang, D.M. Zeglinski, A. López Vázquez-de-Parga, G.A. Somorjai and M. Salmeron.
Proc. 5th Intl. Conf. STM/Spectroscopy, Baltimore, Maryland, July 23-27, 1990.
J. Vac. Sci. Technol. B. 9, (2) 886 (1991). LBNL-29369
91. *Scanning tunneling microscopy at high gap resistances and on chemically modified silicon surfaces*
T.E. Wilson, M.N. Murray, D.F. Ogletree, M.D. Bednarski, C.R. Cantor and M.B. Salmeron.
Proc. 5th Intl. Conf. STM/Spectroscopy, Baltimore, Maryland, July 23-27, 1990.
J. Vac. Sci. Technol. B. 9, (2) 1171 (1991). LBNL-29737
92. *Tip-surface forces during imaging by scanning tunneling microscopy*
M. Salmeron, D.F. Ogletree, C. Ocal, H.-C. Wang, G. Neubauer, W. Kolbe and G. Meyers.
Proc. 5th Intl. Conf. STM/Spectroscopy, Baltimore, Maryland, July 23-27, 1990.
J. Vac. Sci. Technol. B. 9, (2) 1347 (1991). LBNL-29714
93. *Thin film synthesis using miniature pulsed metal vapor vacuum arc plasma guns*
X. Godechot, M.B. Salmeron, D.F. Ogletree, J.E. Galvin, R.A. MacGill, M.R. Dickinson, K.M. Yu and I.G. Brown.
Materials Research Soc. Symp. Proc. 190, 95 (1991).
94. *Formation of sulfur clusters on Re(0001) surfaces observed with the STM*
R.Q. Hwang, D.M. Zeglinski, A. López Vázquez-de-Parga, D.F. Ogletree, G.A. Somorjai, M. Salmeron and D.R. Denley.
Phys. Rev. B. 44, (4) 1914 (1991).
95. *The kinetics of CO₂ hydrogenation on a Rh foil promoted by titania overayers*
K.J. Williams, A.B. Boffa, M. Salmeron, A.T. Bell and G.A. Somorjai.
Catalysis Lett. 9, 415 (1991). LBNL-30393
96. *The effects of titania overayers on C₂H₄/CO/H₂ reactions over a Rh foil*
K.J. Williams, A.B. Boffa, M. Salmeron, A.T. Bell and G.A. Somorjai.
Catal. Lett. 11, 77 (1991). LBNL-30394
97. *Scanning tunneling microscopy and the atomic structure of solid surfaces (review paper)*
F. Ogletree and M. Salmeron.
Progress in Solid-State Chemistry. 20, 235 (1990). LBNL-30979
98. *In-situ electrochemical scanning tunneling microscopy study of the structural changes of silver surfaces following an oxidation-reduction cycle in 1M KCl*
J.-S. Chen, T.M. Devine, D.F. Ogletree and M. Salmeron.
Surf. Sci. 258, 346 (1991). LBNL-30905

- 99.** *Imaging of biological material with STM/AFM*
 M.Salmeron, D.F. Ogletree, G. Neubauer, M.N. Murray, T.E. Wilson, M.D. Bednarski, W. Kolbe and A. Folch.
 Proc. Intl. Symp. Optical Appl. Science and Engineering, San Diego, California, July 21-26, 1991.
Scanning Microscopy Instrumentation, ed. G.S. Kino. **Proc. SPIE** 1556, 40 (1992).
 LBNL-31246
- 100.** *Studies of chemisorption with the scanning tunneling microscope*
 M. Salmeron.
 Proc. 6th Latin-American Symp. on Surface Physics, Cusco, Peru, September 3-7, 1990.
Surface Science, eds. F.A. Ponce and M. Cardona, **Springer Proc. in Physics**, Vol. 62, pp. 105-114. Springer-Verlag, Berlin, Germany, 1992. LBNL-29747
- 101.** *Atomic force microscopy imaging of T4 bacteriophages on silicon substrates*
 W.F. Kolbe, D.F. Ogletree and M.B. Salmeron.
 Proc. 6th Intl. Cong. on Scanning Tunneling Microscopy, Interlaken, Switzerland, August 12-16, 1991.
Ultramicroscopy. 42-44, 1113 (1992). LBNL-31121
- 102.** *Tip-dependent contrast in STM imaging of adsorbed sulfur layers: Theory and experiment*
 J.C. Dunphy, D.F. Ogletree, M.B. Salmeron, P. Sautet, M.-L. Bocquet and C. Joachim.
 Proc. 6th Intl. Cong. on Scanning Tunneling Microscopy, Interlaken, Switzerland, August 12-16, 1991.
Ultramicroscopy. 42-44, 490 (1992). LBNL-31262
- 103.** *The role of sulfur in modifying the friction and lubricity of metal surfaces*
 G.A. Somorjai and M. Salmeron.
Surface Science Investigations in Tribology, eds. Y.-W. Chung, A.M. Homola and G.B. Street, pp. 103-111. ACS Symp. Series No. 485, 1992. LBNL-30532
- 104.** *The bonding of hydrogenated and fluorinated diethers to Pt(111) and to zirconium oxide thin films*
 K. Takeuchi, M. Salmeron and G.A. Somorjai.
Surf. Sci. 279, 328 (1992). LBNL-31413
- 105.** *Adsorption and thermal decomposition of CH₃SH on the Pt(111) surface*
 T.S. Rufael, R.J. Koestner, E.B. Kollin, M. Salmeron and J.L. Gland.
Surf. Sci. 297, 272, (1993). LBNL-32954
- 106.** *Imaging of acetylene heterocyclization sites on the sulfided Pd(111) surface*
 A.J. Gellman, J.C. Dunphy and M. Salmeron.
Langmuir. 8, (2) 534 (1992).
- 107.** *Imaging of sulfur overlayer structures on the Pd(111) surface*
 J.G. Forbes, A.J. Gellman, J.C. Dunphy and M. Salmeron.
Surf. Sci. 279, 68 (1992).
- 108.** *Advances in surface chemistry with the scanning tunneling microscope*
 M. Salmeron.
 Proc. 11th Natl. Cong. Sociedad Mexicana de Ciencia de Superficies y Vacio, A.C., San Luis de Potosí, Mexico, September 2-6, 1991.
Superficies y Vacio. 4, 19 (1992). LBNL-31254
- 109.** *Brittle fracture of Cu-30 Au induced by a surface layer*

- J.S. Chen, T.M. Devine and M. Salmeron.
J. Electrochem. Soc. 139, (6) L55 (1992). LBNL-32811
110. *Intergranular vs. transgranular stress corrosion cracking of Cu 30-Au*
J.S. Chen, M. Salmeron and T.M. Devine.
Scripta Metallurgica et Materialia. 26, (5) 739 (1992).
111. *Intergranular and transgranular stress corrosion cracking of Cu 30-Au*
J.S. Chen, M. Salmeron and T.M. Devine.
Corrosion Sci. 34, (12) 2071 (1993).
112. *Evaluation of the structure of polydiacetylene monolayers using fluorescence microscopy and scanning tunneling microscopy*
T.E. Wilson, D.F. Ogletree, M.B. Salmeron and M.D. Bednarski.
Langmuir. 8, (11) 2588 (1992). LBNL-33853
113. *Preparation of monolayers of Re and Pt on metal substrates using a pulsed metal plasma deposition source*
C. Kim, D.F. Ogletree, M.B. Salmeron, X. Godechot, G.A. Somorjai and I.G. Brown.
Appl. Surf. Sci. 59 (3/4) 261 (1992). LBNL-31808
114. *The role of electronic interferences in determining the appearance of STM images: Application to the S(2x2)/Re(0001) system*
P. Sautet, J. Dunphy, D.F. Ogletree and M. Salmeron.
Surf. Sci. 295, 347 (1993). LBNL-32023
115. *Nanometer scale mechanical properties of Au(111) thin films*
M. Salmeron, A. Folch, G. Neubauer, M. Tomitori, D.F. Ogletree and W. Kolbe.
Langmuir. 8, (11) 2832 (1992). LBNL-31963
116. *A scanning tunneling microscope that operates at high pressures and at high temperatures (430 K) and during catalytic reactions*
B.J. McIntyre, M.B. Salmeron and G.A. Somorjai.
Catal. Lett. 14, 263 (1992). LBNL-32303
117. *Els microscopis d'efecte túnel i de forces atòmiques: Finestres al món dels àtoms i molècules*
M. Salmeron
Revista de Física, Societat Catalana de Física, Barcelona, Spain. 2ⁿ Semestre, 1992, pp. 4-14.
118. *Scanning-tunneling-microscopy study of the surface diffusion of sulfur on Re(0001)*
J.C. Dunphy, P. Sautet, D.F. Ogletree, O. Dabboussi and M.B. Salmeron.
Phys. Rev. B. 47, (4) 2330 (1993). LBNL-32618
119. *The influence of sulfur adsorption on the step structure of vicinal Mo(100): A LEED and STM study*
J.C. Dunphy, C. Knight, P. Sautet, D.F. Ogletree, G.A. Somorjai and M.B. Salmeron.
Surf. Sci. 280, 313 (1993). LBNL-32578
120. *A variable pressure/temperature scanning tunneling microscope for surface science and catalysis studies*
B.J. McIntyre, M. Salmeron and G.A. Somorjai.
Rev. Sci. Instrum. 64, (3) 687 (1993). LBNL-32757
121. *Selective dissolution of copper from Au-rich Cu-Au alloys: An electro chemical STM study*

- S. J. Chen, F. Sanz, D.F. Ogletree, V.M. Hallmark, T.M. Devine and M. Salmeron.
Surf. Sci. 292, 289 (1993). LBNL-32756
- 122.** *Application of STM to study adatom diffusion and lateral interactions: Sulfur on Re(0001) at low coverage*
J.C. Dunphy, P. Sautet, D.F. Ogletree and M.B. Salmeron.
J. Vac. Sci. Technol. A. 11, (4) 2145 (1993). LBNL-33017
- 123.** *Comparison of medical-grade ultrahigh molecular weight polyethylene microstructure by atomic force microscopy and transmission electron microscopy*
P.-H. Vallotton, M.M. Denn, B.A. Wood and M.B. Salmeron.
J. Biomater. Sci. Polymer Edn. 6, (7) 609 (1994). LBNL-33079
- 124.** *Atomic force microscopy of biochemically tagged DNA*
M.N. Murray, H.G. Hansma, M. Bezanilla, T. Sano, D.F. Ogletree, W.F. Kolbe, C.L. Smith, C.R. Cantor, S. Spengler, P.K. Hansma and M. Salmeron.
Proc. Natl. Acad. Sci. USA. 90, 3811 (1993). LBNL-33099
- 125.** *Ethylene hydrogenation and ethane hydrogenolysis on a Rh foil with titania overlayers*
K.J. Williams, M.E. Levin, M. Salmeron, A.T. Bell and G.A. Somorjai.
Catal. Lett. 1, 331 (1988).
- 126.** *Adhesion and friction at the atomic scale: Application of the atomic force microscope*
M. Salmeron.
Surface Diagnostics in Tribology: Fundamental Principles and Applications, eds. K. Miyoshi and Y.W. Chung, pp. 75-91. World Scientific Publishing Co., River Edge, New Jersey, 1993. LBNL-32870
- 127.** *Investigation of the structures of sulfur on Mo(100) by scanning tunneling microscopy*
J.C. Dunphy, P. Sautet, D.F. Ogletree and M.B. Salmeron.
J. Vac. Sci. Technol. A. 11, (4) 1975 (1993). LBNL-32966
- 128.** *In situ scanning tunneling microscopy study of platinum (110) in a reactor cell at high pressures and temperatures*
B.J. McIntyre, M. Salmeron and G.A. Somorjai.
J. Vac. Sci. Technol. A. 11 (4) 1964 (1993). LBNL-32968
- 129.** *Coadsorbate induced compression of sulfur overlayers on Re(0001) and Pt(111) by CO*
J.C. Dunphy, B.J. McIntyre, J. Gomez, D.F. Ogletree, G.A. Somorjai and M.B. Salmeron.
J. Chem. Phys. 100, (8) 6092 (1994). LBNL-34213
- 130.** *Growth, structure and chemical properties of FeO overlayers on Pt(100) and Pt(111)*
G.H. Vurens, V. Maurice, M. Salmeron and G.A. Somorjai.
Surf. Sci. 268, 170 (1992). LBNL-30914
- 131.** *How can scanning tunneling microscopy, coupled with theory, help us understand some elementary steps in catalysis?*
P. Sautet, J.C. Dunphy and M.B. Salmeron.
Elementary Reaction Steps in Heterogeneous Catalysis, eds. R.W. Joyner and R.A. van Santen, pp. 305-311. NATO ASI Series C 398. Kluwer Academic Publishers, The Netherlands, 1993.
- 132.** *Theoretical study of photoemission experiments on Pt surfaces with Au overlayers*
R. Baquero, M. Yañez and M. Salmeron.

- J. Phys.: Condensed Matter.** 5, (33A) A161 (1993).
133. *The structure and reactivity of oxide thin films grown on transition metal surfaces*
W. Weiss, A.B. Boffa, J.C. Dunphy, H.C. Galloway, M.B. Salmeron and G.A. Somorjai.
Adsorption on Ordered Surfaces of Ionic Solids and Thin Films, ed. H.J. Freund. Springer Verlag (1993). LBNL-33653
134. *Use of the atomic force microscope to study mechanical properties of lubricant layers*
M.B. Salmeron.
MRS Bull. 18, (5) 20 (1993). LBNL-33757
135. *STM image calculations for adsorbate recognition*
P. Sautet, C. Joachim, M.L. Bocquet and M. Salmeron.
Annales de Chimie-Science des Materiaux 17, (3-4) 217 (1992).
136. *Quantitative analysis of STM images for surface structure determination: Sulfur on Re(0001)*
D. F. Ogletree, P. Sautet, J.C. Dunphy and M. Salmeron
Scanning Probe Microscopies II, ed. Clayton C. Williams. **Proc. SPIE** 1855, 106 (1993). LBNL-33786
137. *Post-fracture analyses of polyethylene-metal interfaces*
D.A. Hill, M.M. Denn and M.B. Salmeron.
Chem. Eng. Sci. 49, (5) 655 (1994).
138. *Viscoelastic and electrical properties of self-assembled monolayers on Au(111) films*
M. Salmeron, G. Neubauer, A. Folch, M. Tomitori, D.F. Ogletree and P. Sautet.
Langmuir. 9, (12) 3600 (1993). LBNL-34113
139. *The structure of monolayer films of FeO on Pt(111)*
H.C. Galloway, J.J. Benítez and M. Salmeron.
Surf. Sci. 298, 127 (1993). LBNL-34140
140. *Scanning tunneling microscopy studies of Si donors (SiGa) in GaAs*
J.F. Zheng, X. Liu, N. Newman, E.R. Weber, D.F. Ogletree and M. Salmeron.
Phys. Rev. Lett. 72, (10) 1490 (1994). LBNL-34499
141. *Reversible displacement of chemisorbed n-alkane thiol molecules on Au(111) surface: An atomic force microscopy study*
G.-y. Liu and M. B. Salmeron.
Langmuir. 10, (2), 367 (1994). LBNL-34366
142. *Nano-scale imaging of corrosion: Application of scanning polarization force microscopy*
Q. Dai, J. Hu, A. Freedman, G.N. Robinson and M. Salmeron.
Proc. Diagnostic Techniques for Semiconductor Materials Processing II, Boston, Massachusetts, November 27-30, 1995.
Diagnostic Techniques for Semiconductor Materials Processing II, eds. S.W. Pang, O.J. Glembocki, F.H. Pollak, F.G. Celii and C.M. Sotomayor Torres. MRS Symposium Proceedings, vol. 406, pp. 215-220. Materials Research Society, Pittsburgh, 1996.
143. *Deposition of Au on a sulfur covered Mo(100) surface: Adsorbate-adsorbate interaction and growth*
J.C. Dunphy, C. Chapelier, D.F. Ogletree and M.B. Salmeron.
Proc. Intl. Conf. Scanning Tunneling Microscopy, Beijing, China, August 9-14, 1993.
J. Vac. Sci. Technol. B. 12, (3) 1742 (1994). LBNL-34501

- 144.** Approach to surface structure determination with the scanning tunneling microscope: Multiple-gap imaging and electron-scattering quantum chemistry theory
J.C. Dunphy, P. Sautet, D.F. Ogletree and M.B. Salmeron.
Phys. Rev. B. 52, (15) 11446 (1995). LBNL-34502
- 145.** Scanning tunneling microscopy tip-dependent image contrast of S/Pt(111) by controlled atom transfer
B.J. McIntyre, P. Sautet, J.C. Dunphy, M. Salmeron and G.A. Somorjai.
Proc. Intl. Conf. Scanning Tunneling Microscopy, Beijing, China, August 9-14, 1993.
J. Vac. Sci. Technol. B. 12, (3) 1751 (1994). LBNL-34503
- 146.** An *in situ* STM determination of a kinetic pathway for the coadsorbate-induced compression of sulfur by CO on Pt(111)
B.J. McIntyre, M. Salmeron and G.A. Somorjai.
Surf. Sci. 323, (3) 189 (1995). LBNL-34504
- 147.** Diffraction and holography with photoelectrons and fluorescent X-rays (review paper)
C.S. Fadley, Y. Chen, R.E. Couch, H. Daimon, R. Denecke, J.D. Denlinger, H. Galloway, Z. Hussain, A.P. Kaduwela, Y.J. Kim, P.M. Len, J. Liesegang, J. Menchero, J. Morais, J. Palomares, S.D. Ruebush, E. Rotenberg, M. Salmeron, R. Scalettar, W. Schattke, R. Singh, S. Thevuthasan, E.D. Tober, M.A. Van Hove, Z. Wang and R.X. Yonzunza.
Proc. 7th Symp. on Surface Physics, Trešt, Czech Republic, June 30-July 4, 1996.
Prog. Surf. Sci. 54, (3-4) 341 (1997). LBNL-40117
- 148.** Surface, interface and nanostructure characterization with photoelectron diffraction and photoelectron and X-ray holography (review paper)
C.S. Fadley, Y. Chen, R.E. Couch, H. Daimon, R. Denecke, H. Galloway, Z. Hussain, A.P. Kaduwela, Y.J. Kim, P.M. Len, J. Liesegang, J. Menchero, J. Morais, J. Palomares, S.D. Ruebush, S. Ryce, M. Salmeron, W. Schattke, S. Thevuthasan, E.D. Tober, M.A. Van Hove, Z. Wang, R.X. Yonzunza and J.J. Zaninovich.
Proc. 2nd Intl. Symposium on Advanced Physical Fields, Tsukuba, Japan, February 19-21, 1997.
J. Surf. Anal. 3, (2) 334 (1997). LBNL-40068
- 149.** Imaging a p(2x2) layer of sulfur on Re(0001) with the STM: An experimental and theoretical study of the effect of adsorption site and tip structure
P. Sautet, J.C. Dunphy, D.F. Ogletree, C. Joachim and M.B. Salmeron.
Surf. Sci. 315, 127 (1994). LBNL-34521
- 150.** Ultrafast scanning probe microscopy
S. Weiss, D.F. Ogletree, D. Botkin, M. Salmeron and D.S. Chemla.
Appl. Phys. Lett. 63, (18) 2567 (1993). LBNL-34347
- 151.** Scanning tunneling microscopy of Si donors in GaAs
J.F. Zheng, X. Liu, N. Newman, E.R. Weber, D.F. Ogletree and M.B. Salmeron.
Proc. 17th International Conference on Defects in Semiconductors (ICDS), Gmunden, Austria, July 18-23, 1993. **Defects in Semiconductors** 17, eds. H. Heinrich and W. Jantsch. **Materials Science Forum** 143-147, p. 1319. Trans Tech Publications, Switzerland (1994). LBNL-34499
- 152.** Growth of FeO_x on Pt(111) studied by scanning tunneling microscopy
H.C. Galloway, J.J. Benítez and M. Salmeron.
Proc. 40th AVS Natl. Symposium, Orlando, Florida, November 15-19, 1993.
J. Vac. Sci. Technol. A. 12, (4) 2302 (1994). LBNL-34765

153. *Interface segregation and clustering in strained-layer InGaAs/GaAs heterostructures studied by cross-sectional scanning tunneling microscopy*
 J.F. Zheng, J.D. Walker, M.B. Salmeron and E.R. Weber.
Phys. Rev. Letts. 72, 2414 (1994). LBNL-34768
 Erratum: **Phys. Rev. Letts.** 73, (2) 368 (1994).
154. *'Nano-catalysis' by the tip of a scanning tunneling microscope operating inside a reactor cell*
 B.J. McIntyre, M. Salmeron and G.A. Somorjai.
Science. 265, 1415 (1994). LBNL-34787
155. *Surface crystallography of a Re(0001)-(2x2)-S and Re (0001)-(2 $\sqrt{3}$ x 2 $\sqrt{3}$)R30°-6S: A combined LEED and STM study*
 A. Barbieri, D. Jentz, N. Materer, G. Held, J. Dunphy, D.F. Ogletree, P. Sautet, M. Salmeron, M.A. Van Hove and G.A. Somorjai.
Surf. Sci. 312, 10 (1994). LBNL-34788
156. *Si Donors (SiGa) in GaAs observed by scanning tunneling microscopy*
 J.F. Zheng, X. Liu, E.R. Weber, D.F. Ogletree and M.B. Salmeron.
J. Vac. Sci. Technol. B. 12, (3) 2104 (1994). LBNL-35006
157. *Cross-sectional scanning tunneling microscopy of semiconductor vertical-cavity surface-emitting laser structure*
 J.F. Zheng, D.F. Ogletree, J. Walker, M.B. Salmeron and E.R. Weber.
J. Vac. Sci. Technol. B. 12, (3) 2100 (1994). LBNL-35007
158. *Empty state and filled state image of ZnGa acceptor in GaAs studied by STM*
 J.F. Zheng, M.B. Salmeron and E.R. Weber.
Appl. Phys. Lett. 64, (14), 1836 (1994). LBNL-35008
 Erratum: **Appl. Phys. Lett.** 65, (6) 790 (1994).
159. *Ultrafast scanning probe microscopy*
 D. Botkin, S. Weiss, D.F. Ogletree, M.B. Salmeron and D.S. Chemla.
 Proc. Generation, Amplification and Measurement of Ultrashort Laser Pulses, Los Angeles, California, January 25-27, 1994.
Generation, Amplification and Measurement of Ultrashort Laser Pulses, eds. R.P. Trebino and I.A. Walmsley.
Proc. SPIE 2116, 376 (1994). LBNL-35089
160. *Toward ultrafast movies of moving atoms*
 S. Weiss, D. Botkin, D.F. Ogletree, M. Salmeron and D.S. Chemla.
Optics and Photonics News. December, 36 (1993).
161. *Friction and load on well defined surfaces studied by atomic force microscopy*
 D.F. Ogletree, J. Hu, X.-d. Xiao, C. Morant, Q. Dai, R. Vollmer, R. Carpick and M. Salmeron.
 Proc. Forces in Scanning Probe Methods, NATO Advanced Study Institute, Schluchsee, Germany, March 7-18, 1994.
Forces in Scanning Probe Methods, eds. H.-J. Güntherodt, D. Anselmetti and E. Meyer, pp. 337-344. NATO ASI Series E : Applied Sciences. Kluwer Academic Publishers, The Netherlands, 1995. LBNL-35458
162. *Atomic scale interface structure of In_{0.2}Ga_{0.8}As/GaAs strained layers studied by cross-sectional scanning tunneling microscopy*
 J.F. Zheng, M.B. Salmeron and E.R. Weber.

- Proc. 1993 Fall Meeting of the Materials Research Society, Boston, Massachusetts, November 29-December 2, 1993.
- Defect-Interface Interactions Symposium**, eds. E.P. Kvam, A.H. King, M.J. Mills, T.D. Sands and V. Vitek, pp. 111-116. Mat. Res. Soc. Symp. Proc. Vol. 319. Materials Research Society, Pittsburgh, 1994. LBNL-35470
163. *An unexpected packing of fluorinated n-alkane thiols on Au(111): A combined atomic force microscopy and x-ray diffraction study*
G.-y. Liu, P. Fenter, C.E.D. Chidsey, D.F. Ogletree, P. Eisenberger and M. Salmeron.
J. Chem. Phys. 101, (5) 4301 (1994). LBNL-35527
164. *The effect of shallow donors and acceptors on AlAs/GaAs superlattices intermixing studied on atomic scale*
J.F. Zheng, M. Salmeron and E.R. Weber.
Proc. 6th International Conference on Shallow Level Centers in Semiconductors, Berkeley, California, August 10-12, 1994.
Solid State Commun. 93, (5) 419 (1995). LBNL-35634
165. *Molecular arrangement and mechanical stability of self-assembled monolayers on Au(111) under applied load*
M. Salmeron, G.-y. Liu and D.F. Ogletree.
Forces in Scanning Probe Methods, eds. H.-J. Güntherodt, D. Anselmetti and E. Meyer, pp. 593-598. NATO ASI Series E: Applied Sciences. Kluwer Academic Publishers, The Netherlands, 1995. LBNL-35651
166. *Preparation, structure and mechanical stability of alkylsilane monolayers on mica*
X.-d. Xiao, G.-y. Liu, D.H. Charych and M. Salmeron.
Langmuir. 11, (5) 1600 (1995). LBNL-35815
167. *The bonding properties of hydrogenated and fluorinated molecules to zirconium oxide thin films: Influence of surface defects and water coadsorption*
K. Takeuchi, S.S. Perry, M. Salmeron and G.A. Somorjai.
Surf. Sci. 323, (1-2) 30 (1995). LBNL-35813
168. *Atomic scale friction and wear of mica*
J. Hu, X.-d. Xiao, D.F. Ogletree and M. Salmeron.
Surf. Sci. 327, (3) 358 (1995). LBNL-35921
169. *The growth and structure of titanium oxide films on Pt(111) investigated by LEED, XPS, ISS and STM*
A.B. Boffa, H.C. Galloway, P.W. Jacobs, J.J. Benítez, J.D. Batteas, M. Salmeron, A.T. Bell and G.A. Somorjai.
Surf. Sci. 326, (1-2) 80 (1995). LBNL-35763
170. *Imaging the condensation and evaporation of molecularly thin films of water with nanometer resolution*
J. Hu, X.-d. Xiao, D.F. Ogletree and M. Salmeron.
Science. 268, (5208), 267 (1995). LBNL-36049
171. *Nonlinear optical studies of monomolecular films under pressure*
Q. Du, X.-d. Xiao, D. Charych, F. Wolf, P. Frantz, D.F. Ogletree, Y.R. Shen and M. Salmeron.
Phys. Rev. B. 51, (12) 7456 (1995). LBNL-36349
172. *Scanning tunneling microscopy of the GaAs(110) surface at low bias*

- N.D. Jäger, X. Liu, J.F. Zheng, N. Newman, D.F. Ogletree, E.R. Weber and M. Salmeron.
 Proc. 23rd Intl. Conf. on the Physics of Semiconductors, Berlin, Germany, July 21-26, 1996.
23rd Intl. Conf. on the Physics of Semiconductors, vol. 2, eds., M. Scheffler and R. Zimmermann, pp. 847-850. World Scientific Publishing Co., Singapore, 1996. LBNL-39234
- 173.** *Scanning polarization force microscopy: A technique for imaging liquids and weakly adsorbed liquids*
 J. Hu, X.-D. Xiao and M. Salmeron.
Appl. Phys. Lett. 67, (4) 476 (1995). LBNL-36741
- 174.** *Scanning tunneling microscopy studies of GaAs_{1-x}P_x single crystals*
 X. Liu, E.R. Weber, D.F. Ogletree, M. Salmeron and T. Slupinski.
 Proc. Symp. on Defect and Impurity Engineered Semiconductors and Devices, San Francisco, California, April 17-21, 1995.
Defect and Impurity Engineered Semiconductors and Devices, eds. S. Ashok, J. Chevallier, I. Akasaki, N.M. Johnson and others, pp. 83-88. Mat. Res. Soc. Symp. Proc. Vol. 378. Materials Research Society, Pittsburgh, 1995.
- 175.** *Photoelectron diffraction: Space, time and spin dependence of surface structures* (review paper)
 C.S. Fadley, M.A. Van Hove, Z. Hussain, A.P. Kaduwela, R.E. Couch, Y.J. Kim, P.M. Len, J. Palomares, S. Ryce, S. Ruebush, E.D. Tober, Z. Wang, R.X. Ynzunza, H. Daimon, H. Galloway, M.B. Salmeron and W. Schattke.
 Proc. Winter Workshop on Electron Diffraction and Imaging at Surfaces, Scottsdale, Arizona, January 3-6, 1996.
Surf. Rev. Lett. 4, (3) 421 (1997). LBNL-39033
- 176.** *Impurity effect on surface diffusion: CO/S/Ni(110)*
 X.-d. Xiao, Y. Xie, C. Jakobsen, H. Galloway, M. Salmeron and Y.R. Shen.
Phys. Rev. Lett. 74, (19) 3860 (1995). LBNL-33393
- 177.** *The ultrafast response of a scanning tunneling microscope*
 S. Weiss, D. Botkin, D.F. Ogletree, M. Salmeron and D.S. Chemla.
 Proc. 4th Intl. Workshop on Nonlinear Optics and Excitation Kinetics in Semiconductors (NOEKS 4), Berlin, Germany, November 6-10, 1994.
Phys. Stat. Sol. (b). 188, (1) 343 (1995). LBNL-36463
- 178.** *Scanning tunneling microscopy of point defects and interfaces in compound semiconductors*
 J.F. Zheng, M. Salmeron and E.R. Weber.
 Proc. Joint Meeting of the Canadian, American and Mexican Physics Societies, University City, Quebec, Canada, June 11-16, 1995 (CAM-95 Physics Meeting).
AIP Conf. Proc. 342, 30 (1995). LBNL-36643
- 179.** *Total alignment of calcite at acidic polydiacetylene films: Cooperativity at the organic-inorganic interface*
 A. Berman, D.J. Ahn, A. Lio, M. Salmeron, A. Reichert and D. Charych.
Science. 269, 515 (1995). LBNL-36894
- 180.** *Fenómenos tribológicos*
 M. Salmeron.
Ciencia, Tecnología, Medio Ambiente: Anuario 1996, eds. C. Estévez and Á. Peralta, pp. 282-285. El País, Madrid, 1995.
- 181.** *Design of a surface force apparatus for tribology studies combined with non-linear optical spectroscopy*

- P. Frantz, F. Wolf, X.-d. Xiao, Y. Chen, S. Bosch and M. Salmeron.
Rev. Sci. Instrum. 68, (6) 2499 (1997). LBNL-39680
- 182.** *Chemisorption, diffusion and reactions on surfaces by scanning tunneling microscopy*
M. Salmeron and J.C. Dunphy.
Proc. Faraday Discussion on Catalysis and Surface Science at High Resolution, Reading, United Kingdom, December 16-18, 1996.
Faraday Discuss. 105, 151 (1996). LBNL-39209
- 183.** *SFG and STM studies of the Pt(111) crystal face at atmospheric CO and oxygen pressures: Preparation of platinum nanocluster arrays*
X. Su, J. Jensen, M.X. Yang, M.B. Salmeron, Y.R. Shen and G.A. Somorjai.
Faraday Discuss. 105, 263 (1996). LBNL-39272
- 184.** *A variable temperature ultrahigh vacuum atomic force microscope*
Q. Dai, R. Vollmer, R.W. Carpick, D.F. Ogletree and M. Salmeron.
Rev. Sci. Instrum. 66, (11) 5266 (1995). LBNL-37207
- 185.** *Surface structure determination by STM vs. LEED (review paper)*
M.A. Van Hove, J. Cerdá, P. Sautet, M.-L. Bocquet and M. Salmeron.
Proc. 7th Symp. on Surface Physics, Trest, Czech Republic, June 30-July 4, 1996.
Prog. Surf. Sci. 54 (3-4) 315 (1997). LBNL-39001
- 186.** *The growth of iron oxide films on Pt(111): A combined XPD, STM and LEED study*
Y.J. Kim, C. Westphal, R.X. Ynzunza, Z. Wang, H.C. Galloway, M. Salmeron, M.A. Van Hove and C.S. Fadley
Surf. Sci. 416, (1-2) 68 (1998). LBNL-42750
- 187.** *Advances in ultrafast scanning tunneling microscopy*
D. Botkin, J. Glass, D.S. Chemla, D.F. Ogletree, M. Salmeron and S. Weiss.
Appl. Phys. Lett. 69, (9) 1321 (1996). LBNL-38864
- 188.** *Comparative atomic force microscopy study of the chain length dependence of frictional properties of alkylthiols on gold and alkylsilanes on mica*
A. Lio, D.H. Charych and M. Salmeron.
J. Phys. Chem. B. 101, (19) 3800 (1997). LBNL-39635
- 189.** *An atomic force microscopy study of the pressure dependent structural and frictional properties of n-alkanethiols on gold*
A. Lio, C. Morant, D.F. Ogletree and M. Salmeron.
J. Phys. Chem. B. 101, (24) 4767 (1997). LBNL-39587
- 190.** *Nano-scale imaging of a corrosion reaction: Sulfuric acid droplets on aluminum surfaces*
Q. Dai, J. Hu, A. Freedman, G.N. Robinson and M. Salmeron.
J. Phys. Chem. B. 100, (1) 9 (1996). LBNL-37282
- 191.** *Molecular imaging of thermochromic carbohydrate-modified polydiacetylene thin films*
A. Lio, A. Reichert, D.J. Ahn, J.O. Nagy, M. Salmeron and D.H. Charych.
Langmuir. 13, (24) 6524 (1997). LBNL-39685
- 192.** *Wetting and capillary phenomena of water on mica*
L. Xu, A. Lio, J. Hu, D.F. Ogletree and M. Salmeron.
J. Phys. Chem. B. 102, (3) 540 (1998). LBNL-40550

193. *Adsorption of water on NaCl (100) surfaces: The role of atomic steps*
Q. Dai, J. Hu and M. Salmeron.
J. Phys. Chem. B. 101, (11) 1994 (1997). LBNL-39235
194. *Imaging and manipulation of nanometer size liquid droplets by scanning polarization force microscopy*
J. Hu, R.W. Carpick, M. Salmeron and X.-D. Xiao.
Proc. 8th Intl. Conf. on Scanning Tunneling Microscopy (STM '95), Snowmass Village, Colorado, July 23-28, 1995.
J. Vac. Sci. Technol. B. 14, (2) 1341 (1996). LBNL-37576
195. *A scanning tunneling microscope with continuous flow cryostat sample cooling*
S. Behler, M.K. Rose, J.C. Dunphy, D.F. Ogletree, M. Salmeron and C. Chapelier.
Rev. Sci. Instrum. 68, (6) 2479 (1997). LBNL-39449
196. *Monitoring surfaces on the molecular level during catalytic reactions at high pressure by sum frequency generation vibrational spectroscopy and scanning tunneling microscopy*
P.S. Cremer, B.J. McIntyre, M. Salmeron, Y.-R. Shen and G.A. Somorjai.
Catal. Lett. 34, 11 (1995). LBNL-37270
197. *Coadsorbate induced reconstruction of a stepped Pt(111) surface by sulfur and CO: A novel surface restructuring mechanism observed by scanning tunneling microscopy*
J.D. Batteas, J.C. Dunphy, G.A. Somorjai and M. Salmeron.
Phys. Rev. Lett. 77, (3) 534 (1996). LBNL-37400
198. *The structure of molecularly thin films of water on mica in humid environments*
J. Hu, X.-D. Xiao, D.F. Ogletree and M. Salmeron.
Surf. Sci. 344, 221 (1995). LBNL- 37419
Erratum: **Surf. Sci.** 355, 255 (1996).
199. *Measurement of interfacial shear (friction) with an ultra-high vacuum atomic force microscope*
R.W. Carpick, N. Agrait, D.F. Ogletree and M. Salmeron.
Proc. 8th Intl. Conf. on Scanning Tunneling Microscopy (STM '95), Snowmass Village, Colorado, July 23-28, 1995.
J. Vac. Sci. Technol. B 14, (2) 1289 (1996). LBNL-37568
200. *Formation and morphology of hydrocarbon clusters on Pt(111) produced by the thermal decomposition (coking) of propylene under high pressures of H₂ and CO observed in situ by scanning tunneling microscopy*
B.J. McIntyre, M. Salmeron and G.A. Somorjai.
J. Catal. 164, 184 (1996). LBNL-38230
201. *Chain length dependence of the frictional properties of alkylsilane molecules self-assembled on mica by AFM*
X.-D. Xiao, J. Hu, D.H. Charych and M. Salmeron.
Langmuir. 12, (2) 235 (1996). LBNL-37718
202. *The origin of STM contrast differences for inequivalent S atoms on a Mo(100) surface*
P. Sautet, J.C. Dunphy and M. Salmeron.
Surf. Sci. 364, (3) 335 (1996). LBNL-37993
203. *Variation of the interfacial shear strength and adhesion of a nanometer-sized contact*
R.W. Carpick, N. Agrait, D.F. Ogletree and M. Salmeron.

- Proc. Workshop on Physical and Chemical Mechanisms in Tribology, Bar Harbor, Maine, August 28- September 1, 1995
Langmuir. 12, (13) 3334 (1996). LBNL-37676
- 204.** *Design consideration in an ultrafast scanning tunneling microscope*
D. Botkin, S. Weiss, D.F. Ogletree, J. Beeman, M. Salmeron and D.S. Chemla.
Rev. Sci. Instrum. 66, (8) 4130 (1995). LBNL-36792
- 205.** *Imaging of single extended DNA molecules on flat amino-propyltriethoxysilane (APS)-mica by atomic force microscopy*
J. Hu, M. Wang, H.-U. G. Weier, P. Frantz, W. Kolbe, D.F. Ogletree and M. Salmeron.
Langmuir. 12, (7) 1697 (1996). LBNL-37829
- 206.** *Spatially controlled oxidation by the tip of a scanning tunneling microscope operating inside a reactor*
U. Schröder, B.J. McIntyre, M. Salmeron and G.A. Somorjai.
Surf. Sci. 331-333, 337 (1995). LBNL-37956
- 207.** *Interlayer interactions in epitaxial oxide growth: FeO on Pt(111)*
Y.J. Kim, C. Westphal, R.X. Ynzunza, H. Xiao, Z. Wang, H.C. Galloway, M. Salmeron, M.A. Van Hove and C.S. Fadley.
Phys. Rev. B. 55, (20) 13448 (1997). LBNL-39034
- 208.** *An AFM study of chromatic transitions in polydiacetylene thin films*
A. Lio, A. Reichert, J.O. Nagy, M. Salmeron and D.H. Charych.
Proc. 8th Intl. Conf. on Scanning Tunneling Microscopy (STM '95), Snowmass Village, Colorado, July 23-28, 1995.
J. Vac. Sci. Technol. B. 14, (2) 1481 (1996). LBNL-38067
- 209.** *Use of capacitance to measure surface forces. 1. Measuring distance of separation with enhanced spatial and time resolution*
P. Frantz, N. Agrait and M. Salmeron.
Langmuir. 12, (13) 3289 (1996). LBNL-38105
- 210.** *Química a l'escala atòmica*
M. Salmeron.
Revista de Física, Societat Catalana de Física, Barcelona, Spain. 1^r Semestre, 1996, pp. 30-39.
- 211.** *Structure and contrast in scanning tunneling microscopy imaging of oxides: the FeO monolayer on Pt(111)*
H. Galloway, P. Sautet and M. Salmeron.
Phys. Rev. B. 54, (16) R11145 (1996). LBNL-38462
- 212.** *Spatially (nanometer) controlled hydrogenation and oxidation of carbonaceous clusters by the platinum tip of a scanning tunneling microscopy operating inside a reactor cell*
B.J. McIntyre, M. Salmeron and G.A. Somorjai.
Catal. Lett. 39, 5 (1996). LBNL-38292
- 213.** *Calibration of frictional forces in atomic force microscopy*
D.F. Ogletree, R.W. Carpick and M. Salmeron.
Rev. Sci. Instrum. 67, (9) 3298 (1996). LBNL-38576
- 214.** *Scanning tunneling microscopy (STM) study of benzene and its coadsorption with carbon monoxide on Rh(111)*

- H.A. Yoon, M. Salmeron and G.A. Somorjai.
Surf. Sci. 373, 300 (1997). LBNL-38953
215. *A method to characterize the vibrational response of a beetle type scanning tunneling microscope*
S. Behler, M.K. Rose, D.F. Ogletree and M. Salmeron.
Rev. Sci. Instrum. 68, (1) 124 (1997). LBNL-39202
216. *Coverage dependent structures of sulfur on Pt(111) studied by low energy electron diffraction (LEED) and scanning tunneling microscopy*
H.A. Yoon, N. Materer, M. Salmeron, M.A. Van Hove and G.A. Somorjai.
Surf. Sci. 376, 254 (1997). LBNL-39236
217. *Scratching the surface: Fundamental investigations of tribology with atomic force microscopy*
R.W. Carpick and M. Salmeron.
Chem. Rev. 97, (4) 1163 (1997). LBNL-39448
218. *Lateral stiffness: A new nanomechanical measurement for the determination of shear strengths with friction force microscopy*
R.W. Carpick, D.F. Ogletree and M. Salmeron.
Appl. Phys. Lett. 70, (12) 1548 (1997). LBNL-39632
219. *Lubricant distribution on hard disk surfaces: Effect of humidity and terminal group reactivity*
Q. Dai, G. Vurens, M. Luna and M. Salmeron.
Langmuir. 13, (16) 4401 (1997). LBNL-40049
220. *The use of capacitance to measure surface forces. 2. Application to the study of contact mechanics*
P. Frantz, A. Artsyukhovich, R.W. Carpick and M. Salmeron.
Langmuir. 13, (22) 5957 (1997). LBNL-40082
221. *A LEED and STM study of the structures formed by sulfur on the Rh(111) surface*
H.A. Yoon, M. Salmeron and G.A. Somorjai.
Surf. Sci. 395, (2-3) 268 (1998). LBNL-40135
222. *High resolution imaging of liquid structures: Wetting and capillary phenomena at the nanometer scale*
M. Salmeron, L. Xu, J. Hu and Q. Dai.
MRS Bull. 22, (8) 36 (1997). LBNL-40164
223. *Coadsorption of sulfur and carbon monoxide on platinum single-crystal surfaces studied by scanning tunneling microscopy*
F. Zaera and M. Salmeron.
Proc. 213rd American Chemical Society National Meeting, San Francisco, California, April 13-18, 1997.
Langmuir. 14, (6) 1312 (1998). LBNL-40280
224. *Preparation of mica surfaces for enhanced resolution and cleanliness in the surface forces apparatus*
P. Frantz and M. Salmeron.
Tribol. Lett. 5, (2-3) 151 (1998). LBNL-40367
225. *Efficient method for the simulation of STM images: I. Generalized Green Function formalism*
J. Cerdá, M.A. Van Hove, P. Sautet and M. Salmeron.
Phys. Rev. B. 56, (24) 15885 (1997). LBNL-40449

- 226.** *Efficient method for the simulation of STM images: II. Application to clean Rh(111) and Rh(111)+c(4×2)-2S*
 J. Cerdá, A. Yoon, M.A. Van Hove, P. Sautet, M. Salmeron and G.A. Somorjai.
Phys. Rev. B. 56, (24) 15900 (1997). LBNL-40450
- 227.** *Quantum oscillations in surface-tip transfer of adatoms in AFM/STM with a dissipative environment*
 I.S. Tilinin, M.A. Van Hove and M. Salmeron.
Surf. Sci. Lett. 393, (1-3) L88 (1997). LBNL-40573
- 228.** *Quantum coherence in surface-tip transfer of adatoms in AFM/STM*
 I.S. Tilinin, M.A. Van Hove and M. Salmeron.
Phys. Rev. B. 57, (8) 4720 (1998). LBNL-40572
- 229.** *High pressure adsorbate structures studied by STM: CO on Pt(111) in equilibrium with the gas phase*
 J.A. Jensen, K.B. Rider, M. Salmeron and G.A. Somorjai.
Phys. Rev. Lett. 80, (6) 1228 (1998). LBNL-40601
- 230.** *Tip-surface transfer of adatoms in AFM/STM: Effect of quantum oscillations*
 I.S. Tilinin, M.A. Van Hove and M. Salmeron.
 Proc. 4th Intl. Symposium on Atomically Controlled Surfaces and Interfaces, Waseda University, Tokyo, Japan, October 27-30, 1997.
Appl. Surf. Sci. 130-132, 676 (1998). LBNL-40664
- 231.** *Wetting properties at the submicrometer scale: A scanning polarization force microscopy study*
 F. Rieutord and M. Salmeron.
J. Phys. Chem. B. 102, (20) 3941 (1998). LBNL-41026
- 232.** *Scanning force microscope and vacuum chamber for the study of ice films: Design and first results*
 H. Bluhm, S.H. Pan, L. Xu, T. Inoue, D.F. Ogletree and M. Salmeron.
Rev. Sci. Instrum. 69, (4) 1781 (1998). LBNL-41060
- 233.** *The role of surface relaxations in determining the STM images of sulfur adatoms and clusters on Re(0001): Theory vs. experiment*
 J. Cerdá, M.A. Van Hove, P. Sautet and M. Salmeron.
Surf. Sci. 409, (2) 145 (1998). LBNL-41089
- 234.** *Friction force microscopy investigations of potassium halide surfaces in ultrahigh vacuum: Structure, friction and surface modification*
 R.W. Carpick, Q. Dai, D.F. Ogletree and M. Salmeron.
Tribol. Lett. 5 (1) 91 (1998). LBNL-41117
- 235.** *An AFM study of the tribological properties of NaCl (100) surfaces under moist air*
 L. Xu, H. Bluhm and M. Salmeron.
Surf. Sci. 407, (1-3) 251 (1998). LBNL-41144
- 236.** *The effects of surface ions on the friction and adhesion properties of mica*
 L. Xu and M. Salmeron.
Langmuir. 14, (8) 2187 (1998). LBNL-41155
- 237.** *Acetylene structure and dynamics on Pd(111)*

- J.C. Dunphy, M. Rose, S. Behler, D.F. Ogletree, M. Salmeron and P. Sautet.
Phys. Rev. B. 57, (20) R12705 (1998). LBNL-41214
238. *An AFM study of an ideally hard contact: The diamond(111)/tungsten-carbide interface*
M. Enachescu, R.J.A. van den Oetelaar, R.W. Carpick, D.F. Ogletree, C.F.J. Flipse and M. Salmeron.
Phys. Rev. Lett. 81, (9) 1877 (1998). LBNL-41406
239. *Interpretation of GaAs(110) scanning tunneling microscopy image contrast by the symmetry of the surface Bloch wave functions*
N.D. Jäger, E.R. Weber and M. Salmeron.
J. Vac. Sci. Technol. B 19, (2) 511 (2001). LBNL-41492
240. *Friction of the liquid crystal (8CB) as probed by surface forces apparatus*
A. Artsyukhovich, L.D. Broekman and M. Salmeron.
Langmuir. 15, (6) 2217 (1999). LBNL-41681
241. *Scanning polarization force microscopy study of the condensation and wetting properties of glycerol on mica*
L. Xu and M. Salmeron.
J. Phys. Chem. B. 102, (37) 7210 (1998). LBNL-41688
242. *The adsorption of water on alkali halides surfaces studied by scanning polarization force microscopy*
M. Luna, F. Rieutord, N.A. Melman, Q. Dai and M. Salmeron.
J. Phys. Chem. A. 102, (34) 6793 (1998). LBNL-41707
243. *The structure of para-xylene and meta-xylene adsorbed on Rh(111) studied by scanning tunneling microscopy*
P. Cernota, H.A. Yoon, M. Salmeron and G.A. Somorjai.
Surf. Sci. 415, (3) 351 (1998). LBNL-41733
244. *Identification of adatoms on metal surfaces by STM: Experiment and theory*
I.S. Tilinin, M.K. Rose, J.C. Dunphy, M. Salmeron and M.A. Van Hove.
Surf. Sci. 418, (3) 511 (1998). LBNL-41746
245. *An XPS and scanning polarization force microscopy study of the exchange and mobility of surface ions on mica*
L. Xu and M. Salmeron.
Langmuir. 14, (20) 5841 (1998). LBNL-41759
246. *Scanning tunneling microscopy (review paper)*
M. Salmeron.
Methods in Materials Research: A Current Protocols Publications, ed. Alan C. Samuels.
John Wiley & Sons, New York, 2001. LBNL-41829
247. *Observing friction at work (review paper)*
M. Salmeron.
Chemtech. 28, (9) 17 (1998). LBNL-41881
248. *Ice-like water monolayer adsorbed on mica at room temperature*
P.B. Miranda, L. Xu, Y.R. Shen and M. Salmeron
Phys. Rev. Lett. 81, (26) 5876 (1998). LBNL-42211

- 249.** *A general equation for fitting single asperity contact area and friction measurements*
 R.W. Carpick, D.F. Ogletree and M. Salmeron.
J. Colloid Interface Sci. 211, (2) 395 (1999). LBNL-42232
- 250.** *The relationship between friction and molecular structure: Alkylsilane lubricant films under pressure*
 E. Barrena, S. Kopta, D.F. Ogletree, D.H. Charych and M. Salmeron.
Phys. Rev. Lett. 82, (14) 2880 (1999). LBNL-42442
 Reply to comment: **Phys. Rev. Lett.** 83, 8 (1999).
- 251.** *Structural manipulation of the frictional properties of linear polymers in single molecular layers*
 M.D. Mowery, S. Kopta, D.F. Ogletree, M. Salmeron and C.E. Evans.
Langmuir. 15, (15) 5118 (1999). LBNL-42641
- 252.** *Making, breaking and sliding of nanometer-scale contacts*
 R.W. Carpick, M. Enachescu, D.F. Ogletree and M. Salmeron.
Fracture and Ductile vs. Brittle Behavior: Theory, Modelling and Experiment, eds. G.E. Beltz, R.L. Blumberg Selinger, M.P. Marder and K.-S. Kim. (Pittsburgh: Materials Research Society, 1999) MRS Symposium Proceedings, vol. 539, pp. 93-103. LBNL-42661
- 253.** *Cross-sectional scanning tunneling microscopy studies of heterostructures*
 N.D. Jäger, E.R. Weber and M. Salmeron.
Microprobe Characterization of Semiconductors and Superlattices, ed. Juan Jimenez. (New York: Taylor and Francis, 2002) chapter 4, p.303 (vol.17 of the series "Optoelectronic properties of semiconductors and superlattices"). LBNL-42927
- 254.** *The growth of nanometer thin ice films from water vapor studied using scanning polarization force microscopy*
 H. Bluhm and M. Salmeron.
J. Chem. Phys. 111, (15) 6947 (1999). LBNL-42797
- 255.** *Formation of dipole oriented water films on mica substrates at ambient conditions*
 H. Bluhm, T. Inoue and M. Salmeron.
Surf. Sci. 462, (1-3) L599 (2000). LBNL-43094
- 256.** *Observation of proportionality between friction and contact area at the nanometer scale*
 M. Enachescu, R.J.A. van den Oetelaar, R.W. Carpick, D.F. Ogletree, C.F.J. Flipse and M. Salmeron.
 Proc. 217th American Chemical Society National Meeting, Anaheim, California, March 21-25, 1999.
Tribol. Lett. 7, (2-3) 73 (1999). LBNL-43153
- 257.** *Dense structures formed by CO on Rh(111) studied by scanning tunneling microscopy*
 P. Cernota, K. Rider, H.A. Yoon, M. Salmeron and G. Somorjai.
Surf. Sci. 445, (2-3) 249 (2000). LBNL-43269
- 258.** *A low temperature UHV cross-sectional scanning tunneling microscope for luminescence measurements*
 Y. Khang, Y. Park, M. Salmeron and E.R. Weber.
Rev. Sci. Instrum. 70, (12) 4595 (1999). LBNL-43272
- 259.** *Friction of ice measured using lateral force microscopy*
 H. Bluhm, T. Inoue and M. Salmeron.
Phys. Rev. B. 61, (11) 7760 (2000). LBNL-43485

260. *STM studies on the growth of monolayers: Co on Cu(110) with one half monolayer of preadsorbed oxygen*
W.L. Ling, O. Takeuchi, D.F. Ogletree, Z.Q. Qiu and M. Salmeron.
Surf. Sci. 450, (3) 227 (2000). LBNL-43493
261. *De-wetting of lubricants on hard disks*
L. Xu, D.F. Ogletree, M. Salmeron, H. Tang, J. Gui and B. Marchon.
J. Chem. Phys. 112, (6) 2952 (2000). LBNL-43636
262. *Evolution of the structure and mechanical stability of self-assembled alkane-thiol islands on Au(111) due to diffusion and ripening*
E. Barrena, C. Ocal and M. Salmeron
J. Chem. Phys. 111, (21) 9797 (1999). LBNL-44121
263. *Integration of point-contact microscopy and atomic force microscopy: Application to characterization of graphite/Pt(111)*
M. Enachescu, D. Schleef, D.F. Ogletree and M. Salmeron.
Phys. Rev. B. 60, (24) 16913 (1999). LBNL-44137
264. *Structure and properties of ice and water film interfaces in equilibrium with vapor*
M. Salmeron and H. Bluhm.
Proc. 6th Intl. Conference on the Structure of Surfaces, Vancouver, Canada, July 26-30, 1999.
Surf. Rev. Lett. 6, (6) 1275 (1999). LBNL-44328
265. *Structure of confined films of chain alcohols*
F. Mugele, S. Baldelli, G.A. Somorjai and M. Salmeron.
J. Phys. Chem. 104, (14) 3140 (2000). LBNL-44332
266. *High pressure, high temperature scanning tunneling microscopy*
J.A. Jensen, K.B. Rider, Y. Chen, M. Salmeron and G.A. Somorjai.
J. Vac. Sci. Technol. B. 17, (3) 1080 (1999). LBNL-42249
267. *Adsorption and energetics of isolated CO molecules on Pd(111)*
P. Sautet, M.K. Rose, J.C. Dunphy, S. Behler and M. Salmeron.
Surf. Sci. 453, (1-3) 25 (2000). LBNL-44378
268. *Wetting and molecular orientation of 8CB on silicon substrates*
L. Xu, M. Salmeron and S. Bardon
Phys. Rev. Lett. 84, (7) 1519 (2000). LBNL-44400
269. *Dynamics of layering transitions in confined liquids*
F. Mugele and M. Salmeron
Phys. Rev. Lett. 84, (25) 5796 (2000). LBNL-44447
270. *Field emission study of diamond like carbon films with scanned probe field emission force microscopy*
T. Inoue, D.F. Ogletree and M. Salmeron
Appl. Phys. Lett. 76, (20) 2961 (2000). LBNL-44686
271. *The atomic scale origin of wear on mica and its contribution to friction*
S. Kopta and M. Salmeron
J. Chem. Phys. 113, (18) 8249 (2000). LBNL-44709

- 272.** *Molecular packing changes of alkanethiols monolayers on Au(111) under applied pressure*
 E. Barrena, C. Ocal and M. Salmeron.
J. Chem. Phys. 113, (6) 2413 (2000). LBNL-45220
- 273.** *Studies of wetting and capillary phenomena at nanometer scale with scanning polarization force microscopy*
 L. Xu and M. Salmeron
Nano-Surface Chemistry, ed. M. Rosoff. Chapter 6, pp.243-287 New York: Marcel Dekker, Nov. 1, 2001. LBNL-45264
- 274.** *Adsorption of S, P, As, Se, and Sb on metals, alloys and semiconductors*
 M. Enachescu and M. Salmeron.
Physics of Covered Solid Surfaces: I. Adsorbed Layers on Surfaces, ed. H.P. Bonzel.
 Landolt-Börnstein Series on Numerical Data and Functional Relationships, Vol. III/42. New York: Springer-Verlag, 2001. LBNL-45454
- 275.** *Effect of oxygen surfactant on the magnetic and structural properties of Co films grown on Cu(110)*
 W.L. Ling, Z.Q. Qiu, O. Takeuchi, D.F. Ogletree and M. Salmeron.
Phys. Rev. B. 63, 24408 (2000). LBNL-45470
- 276.** *Frictional properties of thin chain alcohol films*
 F. Mugele and M. Salmeron.
J. Chem. Phys. 114, (4) 1831 (2001). LBNL-45651
- 277.** *Scanning field emission force microscopy and spectroscopy of CVD carbon field emission cathodes*
 T. Inoue, D.F. Ogletree and M. Salmeron.
J. Vac. Sci. Technol. B. 19, (3) 675 (2001). LBNL-45853
- 278.** *Generation of defects in model lubricant monolayers and their contribution to energy dissipation in friction*
 M. Salmeron.
Trib. Lett. 10, 69 (2001). LBNL-46097
- 279.** *Structure and stability of tilted-chain phases of alkanethiols on Au(111)*
 E. Barrena, C. Ocal and M. Salmeron.
J. Chem. Phys. 114, (9) 4210 (2001). LBNL-46577
- 280.** *A comparative AFM study of the structural and frictional properties of mixed and single component films of alkanethiols on Au(111)*
 E. Barrena, C. Ocal and M. Salmeron.
 Proc. 19th European Conf. on Surface Science, Madrid, Spain, September 5-8, 2000.
Surf. Sci. 482-485, (1-3) 1216 (2001). LBNL-46578
- 281.** *Tribocharging phenomena in hard disk amorphous carbon coatings with and without perfluoro-polyether lubricants*
 R.J.A. van den Oetelaar, L. Xu, D.F. Ogletree, M. Salmeron, H. Tang and J. Gui.
J. Appl. Phys. 89, (7) 3993 (2001). LBNL-46596
- 282.** *Scanning polarization force microscopy: A technique for studies of wetting phenomena at the nanometer scale*
 M. Salmeron.

- Proc. International Workshop on Wetting: From Microscopic Origins to Industrial Applications, Hyeres, France, May 6-12, 2000.
- Oil & Gas Science and Technology: Revue de l'Institut Français du Pétrole.**
56. (1) 63 (2001). LBNL-46822
283. *Atomic scale origin of adhesion and friction*
 M. Salmeron, S. Kopta, E. Barrena and C. Ocal.
Fundamentals of Tribology and Bridging the Gap Between the Macro- and Micro/Nanoscales, ed. B. Bhushan, pp. 41-52. NATO ASI Series E: Applied Sciences. Kluwer Academic Publishers, The Netherlands, 2001. LBNL-46857
284. *Nanoscale wetting and de-wetting of lubricants with scanning polarization force microscopy*
 M. Salmeron.
Fundamentals of Tribology and Bridging the Gap Between the Macro- and Micro/Nanoscales, ed. B. Bhushan, pp. 651-662. NATO ASI Series E: Applied Sciences. Kluwer Academic Publishers, The Netherlands, 2001. LBNL-46858
285. *Structure and dynamics of dense monolayers of NO adsorbed on Rh(111) in equilibrium with the gas phase in the torr pressure range*
 K.B. Rider, K.S. Hwang, M. Salmeron and G.A. Somorjai.
Phys. Rev. Lett. 86, (19) 4330 (2001). LBNL-46932
286. *Boundary lubrication: Dynamics of squeeze-out*
 S. Zilberman, B.N.J. Persson, A. Nitzan, F. Mugele and M. Salmeron.
Phys. Rev. E. 63, 055103 (2001). LBNL-46964
287. *Thickness and drainage of perfluoropolyethers under compression*
 L. D.F. Ogletree, M. Salmeron, H. Tang and J. Gui.
J. Chem. Phys. 114, (23) 10504 (2001). LBNL-47370
288. *The premelting of ice studied with photoelectron spectroscopy*
 H. Bluhm, D.F. Ogletree, C.S. Fadley, Z. Hussain and M. Salmeron.
J. Phys.: Condensed Matter 14, L227 (2002). LBNL-47569
289. *Frictional properties of chain alcohols and the dynamics of layering transitions*
 F. Mugele, B. Persson, S. Zilberman, A. Nitzan and M. Salmeron.
 Proc. 221st American Chemical Society National Meeting, San Diego, California, April 1-5, 2001.
Trib. Lett. 12, (2) 123 (2002). LBNL-47809
290. *Subsurface impurities in Pd(111) studied by scanning tunneling microscopy*
 M. Rose, A. Borg, T. Mitsui, D.F. Ogletree and M. Salmeron.
J. Chem. Phys. 115, 10927 (2001). LBNL-47927
291. *Wetting, confinement and drainage of liquids*
 Miquel Salmeron, Frieder Mugele, and Lei Xu.
 Proceedings of the American Chemical Society Meeting, Orlando, 2002.
ACS Symposium Series 882, "Dynamics and Friction in Submicrometer Confining Systems". Ed. Y. Braiman, J.M. Drake, F. Family and J. Klafter. Chapter 9. 2004
292. *Two-Dimensional observation of drainage and layering transitions in confined liquids*
 Frieder Mugele, Thomas Becker, Anke Klingner, and Miquel Salmeron
Colloids and Surfaces A. 206, (1-3) 105 (2002). LBNL-48711

- 293.** *High Pressure (1 Torr) Scanning Tunneling Microscopy (STM) Study of the Coadsorption and Exchange of CO and NO on the Rh(111) Crystal Face*
 K.B. Rider, K. Hwang, M. Salmeron and G. Somorjai
J. Am. Chem. Soc. 124, 5588 (2002). LBNL-48924
- 294.** *Preparation and Characterization of Self-Assembled Monolayers of Octadecylamine on Mica using Hydrophobic Solvents*
 J.J. Benitez, S. Kopta, D.F. Ogletree and M. Salmeron
Langmuir. 18, (16) 6096 (2002). LBNL-49037
- 295.** *Ordered Structures of CO on Pd(111) Studied by STM*
 M. Rose, T. Mitsui, J. Dunphy, A. Borg, D.F. Ogletree, Miquel Salmeron and P. Sautet
Surf. Sci. 512, 48 (2002). LBNL-49381
- 296.** *Coadsorption and interactions of O and H on Pd(111)*
 T. Mitsui, M. Rose, E. Fomin, F. Ogletree and Miquel Salmeron
Surf. Sci. 511, 259 (2002). LBNL-49380
- 297.** *Preparation and Characterization of Self-assembled Monolayers of Octadecylamine on Mica from Ethanol Solutions*
 J.J. Benitez, D.F. Ogletree and M. Salmeron
Langmuir. 19, (8) 3276 (2003). LBNL-50548
- 298.** *A differentially pumped electrostatic lens system for photoemission studies in the millibar range*
 D. Frank Ogletree, H. Bluhm, G. Lebedev, C. Fadley, Z. Hussain and M. Salmeron
Rev. Sci. Instr. 73, (11) 3872 (2002). LBNL-49614
- 299.** *An STM study of the reaction between hydrogen and oxygen to form water on Pd(111)*
 T. Mitsui, M.K. Rose, E. Fomin, D. Frank Ogletree and M. Salmeron
J. Chem. Phys. 117, (12) 5855 (2002). LBNL-50009
- 300.** *Water diffusion and clustering on Pd(111)*
 T. Mitsui, M.K. Rose, E. Fomin, D. Frank Ogletree and M. Salmeron
Science. 297, 1850 (2002). LBNL-49965
- 301.** *Molecular packing changes in octadecylamine monolayers on mica induced by pressure and humidity*
 J.J. Benitez, S. Kopta, I. Díez-Pérez, F. Sanz, D.F. Ogletree and M. Salmeron
Langmuir. 19, (3) 762 (2003). LBNL-51263
- 302.** *Hydrogen adsorption and diffusion on Pd(111)*
 T. Mitsui, M.K. Rose, E. Fomin, D.F. Ogletree, and M. Salmeron
Surf. Sci. 540, 1 (2003). LBNL-52006
- 303.** *Dissociative hydrogen adsorption on palladium requires aggregates of three or more vacancies*
 T. Mitsui, M.K. Rose, E. Fomin, D.F. Ogletree, and M. Salmeron
Nature. 422, 705 (2003). LBNL-52007
- 304.** *In situ investigation of the nature of the active surface of a vanadyl phosphate catalyst during n-butane oxidation to maleic anhydride*
 M. Hävecker, R.W. Mayer, A. Knop-Gericke, H. Bluhm, E. Kleimenov, A. Liskowsi, D. Su, R. Follath, F. Requejo, D.F. Ogletree, M. Salmeron, J.A. Lopez-Sanchez, J.K. Bartley, G.J. Hutchings, and R. Schlögl
J. Phys. Chem. B. 107, 4587 (2003). LBNL-53560

- 305.** *SFG Spectroscopy from 10^{-8} to 1000 mbar: Less-ordered CO structures and Coadsorption on Pd(111)*
 Matthias Morkel, Holger Unterhalt, M. Salmeron, Günther Rupprechter, Hans-Joachim Freund
Surf. Sci. 532-535, 103 (2003). LBNL-52492
- 306.** *The physics of imaging p-n junctions by scanning tunneling microscopy and spectroscopy*
 N.D.Jager, M. Marso, M. Salmeron, E.R. Weber, K. Urban, and Ph. Ebert
Phys. Rev. B. 67, 165307 (2003). LBNL-53561
- 307.** *Superficies en equilibrio con gases a presiones atmosféricas*
 Salvador Ferrer and Miquel Salmeron
Revista Española de Física. 17, 30 (2003). LBNL-53559
- 308.** *Chemisorption and dissociation of O₂ on Pd(111) studied by STM*
 M.K. Rose, A. Borg, J.C. Dunphy, T. Mitsui, D.F. Ogletree, and M. Salmeron
Surf. Sci. 547, 162-170 (2003). LBNL-53563
- 309.** *Methanol oxidation on a copper catalyst investigated using in situ X-ray photo electron spectroscopy*
 H. Bluhm, M. Hävercker, A. Knip-Gericke, D. Teschner, E. Eleimenov, V.I. Bukhtiyarov
 D.F. Ogletree, M. Salmeron, and R. Schlögl
J. Phys. Chem. B. 108, 14340 (2004). LBNL-53564
- 310.** *The interaction of water with self-assembled monolayers of alkylsilanes on mica*
 I. Díez, M. Luna, F. Teheran, D.F. Ogletree, F. Sanz, and Miquel Salmeron
Langmuir 20, (4) 1284 (2004). LBNL-53566
- 311.** *The role of intermolecular and molecule-substrate interactions in determining the structure and stability of alkanethiols on Au(111)*
 E. Barrena, E. Palacios-Lidón, C. Munuera, X. Torrelles, S. Ferrer, U. Jonas, M. Salmeron and C. Ocal
J. Am. Chem. Soc. 126, (1) 385 (2004). LBNL-53567
- 312.** *Chemisorption of atomic Oxygen on Pd(111) studied by STM*
 M.K. Rose, A. Borg, J.C. Dunphy, T. Mitsui, D.F. Ogletree, and M. Salmeron
Surf. Sci. 561, 69-78 (2004). LBNL-53568
- 313.** *Preparation and Nanoscale mechanical properties of self-assembled Carboxylic Acid Functionalized Pentathiophene on Mica*
 J. Chen, A.R. Murphy, J. Esteve, D.F. Ogletree, M. Salmeron and J.M.J. Fréchet
Langmuir. 20, (18) 7703-7710 (2004). LBNL-53941
- 314.** *When Langmuir is too simple: H₂ dissociation on Pd(111) at high coverage*
 Nuria Lopez, Zbigniew Lodziana, Francesc Illas and Miquel Salmeron
Phys. Rev. Lett. 93, (14) 6103 (2004). LBNL-54027
- 315.** *The role of contaminants in the variation of adhesion, friction, and electrical conduction properties of carbide-coated scanning probe tips and Pt(111) in ultrahigh vacuum*
 M. Enachescu, R.W. Carpick, D.F. Ogletree and M. Salmeron
J. App. Phys. 95, (12) 7694 (2004). LBNL-54382
- 316.** *An in situ XPS study of site competition of CO and NO on Rh(111) in equilibrium with the gas phase*

- F.G. Requejo, E.L.D. Hebenstreit, D.F. Ogletree and M. Salmeron
J. Catal. 226, (1) 83-87 (2004). LBNL-54248
- 317.** *Diffusion and pair interactions of CO molecules on Pd(111)*
T. Mitsui, M. K. Rose, E. Fomin, D.F. Ogletree and M. Salmeron
Phys. Rev. Lett. 94, (03) 6101 (2005). LBNL-54380
- 318.** *Friction and adhesion properties of clean and oxidized Al-Ni-Co decagonal quasicrystals: a UHV atomic force microscopy/scanning tunneling microscopy study*
Jeong Young Park, D. Frank Ogletree and Miquel Salmeron
Trib. Lett. 17, (3) 629 (2004). LBNL-55451
- 319.** *Dielectric Properties of Self-Assembled Layers of Octadecylamine on Mica in Dry and Humid Environments*
J.J. Benitez, E. Diez-Pérez, F. Sanz and Miquel Salmeron
J. Chem. Phys. 123, 104706 (2005). LBNL-55452
- 320.** *Elastic and Inelastic deformation of ethylene-passivated 10-fold decagonal Al-Ni-Co quasicrystal surface*
J.Y. Park, D.F. Ogletree, C.J. Jenks, P.A. Thiel and M. Salmeron
Phys. Rev. B. 71, 144203 (2005). LBNL-55454
- 321.** *AFM study of β -Substituted-7T Oligothiophene films on Mica: Mechanical Properties and humidity dependent phases*
J. Chen, I. Ratera, D.F. Ogletree, M. Salmeron, A.R. Murphy and J.M.J. Fréchet
Langmuir. 21, 1080-1085 (2005). LBNL-55455
- 322.** *The origin of contrast in STM images of oxygen on Pd(111) and its dependence on tip structure and tunneling parameters*
J.M. Blanco, C. González, P. Jelínek, J. Ortega, F. Flores, R. Pérez, M. Rose, M. Salmeron, J. Méndez, J. Wintterlin and G. Ertl
Phys Rev. B. 71, 113402 (2005). LBNL-57761
- 323.** *Migration of subsurface Carbon Impurities in Pd(111)*
L. Gracia, M. Calatayud, J. Andres, C. Minot and M. Salmeron
Phys Rev. B. 71, 033407 (2005). LBNL-57763
- 324.** *Novel Water overlayer growth on Pd(111) characterized with STM and DFT*
J. Cerdá, A. Michaelides, M.L. Bocquet, P.J. Feibelman, T. Mitsui, M. Rose, E. Fomin, and M. Salmeron
Phys. Rev. Lett. 93, (11) 6101 (2004). LBNL-58544
- 325.** *In situ study of water induced segregation of bromide in bromide-doped sodium chloride by Scanning Polarization Force Microscopy*
Sutapa Ghosal, Albert Verdaguer, John C. Hemminger and Miquel Salmeron
J. Phys. Chem. A. 109, 4744-4749 (2005). LBNL-57764
- 326.** *Direct measurement of forces during scanning tunneling microscopy (STM) imaging of silicon pn junctions*
J.Y. Park, R.J. Phaneuf, D.F. Ogletree and Miquel Salmeron
App. Phys. Lett. 86, 172105 (2005). LBNL-57765

- 327.** *High pressure scanning tunneling microscopy study of CO poisoning of ethylene hydrogenation on Pt(111) and Rh(111) single crystals.*
 D.C. Tang, K.S. Hwang, M. Salmeron and G.A. Somorjai
J. Phys. Chem. B. 108, 13300-13306 (2004). LBNL-58551
- 328.** *Electron Spectroscopy of Aqueous Solution Interfaces Reveals Surface Enhancement of Halides: Implications for Atmospheric Chemistry*
 S. Ghosal, J.C. Hemminger, H. Bluhm, B.S. Mun, E.L.D. Hebenstreit, G. Ketteler, D.F. Ogletree, F. Requejo and M. Salmeron
Science. 307, 563 (2005). LBNL-58552
- 329.** *Atomic-Scale Friction and its Connection to Fracture Mechanics*
 R. W. Carpick, E.E. Flater, K. Sridharan, D. F. Ogletree and M. Salmeron
J.O.M. 56, (10) 48-52 (2004). LBNL-58553
- 330.** *High Frictional Anisotropy of Periodic and Aperiodic Directions on a Quasicrystal Surface*
 J.Y. Park, D.F. Ogletree, M. Salmeron, R.A. Ribeiro, P.C. Canfield, C.J. Jenks and P.A. Thiel
Science. 309, 1354 (2005). LBNL-58558
- 331.** *Adhesion properties of decagonal quasicrystals in ultrahigh vacuum*
 J.Y. Park, D.F. Ogletree, M. Salmeron, R.A. Ribeiro, P.C. Canfield, C.J. Jenks and P.A. Thiel
Philosophical Magazine. 86, (6-8) 945-950 (2006). LBNL-58559
- 332.** *Effective tip radius in electrostatic force microscopy*
 G.M. Sacha, A. Verdaguer, J. Martínez, J.J. Sáenz, D. F. Ogletree and M. Salmeron
App. Phys. Lett. 86, 123101 (2005). LBNL-58560
- 333.** *Soft X-ray Microscopy and Spectroscopy at the Molecular Environmental Science Beamline at the Advanced Light Source*
 H. Bluhm, K. Andersson, T. Araki, K. Benzerara, G.E. Brown, J.J. Dynes, S. Ghosal, M.K. Gilles, H.-Ch. Hansen, J.C. Hemminger, A.P. Hitchcock, G. Ketteler, A.K.D. Kilcoyne, E. Kneedler, J.R. Lawrence, G.G. Leppard, J. Majzlamm, B.S. Mun, S.C.B. Myllyniemi, A. Nilsson, H. Ogasawara, D.F. Ogletree, K. Pecher, M. Salmeron, D.K. Shuh, B. Tonner, T. Tyliszczak, T. Warwick, T.H. Yoon.
J. Electr. Spectr. & Rel. Phen. 150, 86–104 (2006). LBNL-57513
- 334.** *Atomic Force Microscopy Nanotribology Study of Oligothiophene Self-Assembled Films*
 I. Ratera, J. Chin, A. Murphy, D.F. Ogletree, J.M.J. Fréchet, and M. Salmeron
Nanotechnology. 16, S235-S239 (2005). LBNL-58931
- 335.** *Sensing dipole fields at atomic steps with combined scanning tunneling and force microscopy*
 J.Y. Park, G.M. Sacha, M. Enachescu, D.F. Ogletree, R.A. Ribeiro, P.C. Canfield, C.J. Jenks, P.A. Thiel, J.J. Sáenz and M. Salmeron
Phys. Rev. Lett. 95, 136802 (2005). LBNL-58561
- 336.** *Atomic Scale coexistence of Periodic and quasiperiodic order in a 2-fold Al-Ni-Co decagonal quasicrystal surface*
 J.Y. Park, D. F. Ogletree, M. Salmeron, R.A. Ribeiro, P.C. Canfield, C. J. Jenks, and P.A. Thiel,
Phys. Rev. B. 72, 220201R (2005). LBNL-59105
- 337.** *Kinetic Effects in the Self-Assembly of Pure and Mixed Tetradecyl and Octadecylamine Molecules on Mica*
 J.J. Benítez and M. Salmeron
Surf. Sci. 600, 1326-1330 (2006). LBNL-58880

- 338.** *The Molecular Structure of Water at Interfaces: Wetting at the Nanometer Scale*
 A.Verdaguer, G.M. Sacha, H. Bluhm, M. Salmeron
Chem. Rev. 106, 1478-1510 (2006). LBNL-59206
- 339.** *The nature of the catalytic sites for H₂ dissociation.*
 M. Salmeron
Topics in Cat. 36, 55 (2005). LBNL-59625
- 340.** *The Electronic Structure of ensembles of Gold nanoparticles: size and proximity effects*
 H. Liu, B.S. Mun, G. Thornton, S.R. Isaacs, Y-S. Shon, D.F. Ogletree, and M. Salmeron
Phys. Rev. B. 72, 155430 (2005). LBNL-58545
- 341.** *In situ Spectroscopic Study of the Oxidation and Reduction of Pd(111)*
 G. Ketteler, D.F. Ogletree, H. Bluhm, H. Liu, E.L.D. Hebenstreit, M. Salmeron
J. Am. Chem. Soc. 127, 18269-18273 (2005). LBNL-57633
- 342.** *Initial stages of water adsorption on NaCl (100) studied by Scanning Polarization Force Microscopy*
 A. Verdaguer, G.M Sacha, D.F. Ogletree and Miquel Salmeron
J. Chem. Phys. 123, 124703 (2005). LBNL-58550
- 343.** *Vibrationally assisted diffusion of H₂O and D₂O on Pd(111).*
 Evgeny Fomin, Mous Tatarkhanov, Toshi Mitsui, Mark Rose, D.F. Ogletree and Miquel Salmeron
Surf. Sci. 600, 542-546 (2006). LBNL-57423
- 344.** *A study of the topographic and electrical properties of self-assembled islands of alkylsilanes on mica using a combination of non-contact force microscopy techniques*
 M. Luna, D.F. Ogletree and M. Salmeron
Nanotechnology. 16, S1–S7 (2005). LBNL-59079
- 345.** *Electronic interactions between gold nanoclusters in constrained geometries*
 S.H. Kim, S. Hwang, Y-S Shon, D.F. Ogletree, M. Salmeron
Phys. Rev. B. 73, 155406 (2006). LBNL – 58997
- 346.** *STM studies of cyclohexene hydrogenation/dehydrogenation and its poisoning by carbon monoxide on Pt(111)*
 M. Montano, M. Salmeron, G.A. Somorjai
Surf. Sci. 600, 1809-1816 (2006). LBNL- 59027
- 347.** *Electronic control of friction in silicon pn junctions*
 Jeong Young Park, D. F. Ogletree, P.A. Thiel and M. Salmeron
Science 313, 186 (2006). LBNL – 59318
- 348.** *Velocity dependence of friction and hydrogen bonding effects*
 Jinyu Chen, Imma Ratera, J.Y. Park, and M. Salmeron
Phys. Rev. Lett. 96, 236102 (2006). LBNL-59317
- 349.** *The Influence of Alkyl Chain Length and Ripening time on the Self-Assembly of Linear Alkylamines on Mica*
 J.J. Benítez and M. Salmeron
J. Chem. Phys. 125, 044708 (2006). LBNL-59531
- 350.** *Tribological properties of quasicrystals: effect of aperiodic vs. periodic surface order*
 J.Y. Park, D. F. Ogletree, M. Salmeron, R. A. Ribeiro, P.C. Canfield, C.J. Jenks, and P.A. Thiel

- Phys. Rev. B.** 74, 024203 (2006). LBNL-59967
- 351.** *Induced water condensation and bridge formation by electric fields in Atomic Force Microscopy*
G.M. Sacha, A. Verdaguer, M. Salmeron
J. Phys. Chem. B. 110, 14870 (2006). LBNL-59746
- 352.** *Molecular conformation changes in alkylthiols ligands as a function of size in gold nanoparticles*
J. M. Ramallo-Lopez, L. J. Giovanetti, F. G. Requejo, S. R. Isaacs, Y. S. Shon, and M. Salmeron
Phys. Rev. B. 74, 073410 (2006). LBNL-59306
- 353.** *Hydrogen and deuterium exchange on Pt(111) and its poisoning by carbon monoxide studied by surface sensitive high-pressure techniques*
M. Montano, K. Bratlie, M. Salmeron, and G.A. Somorjai
J. Am. Chem. Soc. 128, (40) 13231 (2006). LBNL-60270
- 354.** *Friction-anisotropy dependence in organic self-assembled monolayers*
J. Chen, I. Ratera, A. Murphy, D.F. Ogletree, J.M.J. Fréchet, M. Salmeron
Surf. Sci. 600, 4008-4012 (2006). LBNL-60143
- 355.** *Spontaneous Emergence of Cl⁻ Anions from NaCl(100) at Low Relative Humidity*
P. Cabrera-Sanfelix, D.S. Portal, A. Verdaguer, G.R. Darling, M. Salmeron, A. Arnau
J. Phys. Chem.C. 111, 8000-8004 (2007). LBNL-62692
- 356.** *Hydroxyl induced wetting of metals by water at near ambient conditions*
Susumu Yamamoto, Klas Andersson, Hendrik Bluhm, Guido Ketteler, David E. Starr, Theanne Schiros, Hirohito Ogasawara, Lars G.M. Pettersson, Miquel Salmeron, Anders Nilsson
J. Phys. Chem. C. 111, 7848-7850 (2007) LBNL-62687
- 357.** *The nature of the water nucleation sites on TiO₂(110) surfaces revealed by ambient pressure x-ray photoelectron spectroscopy*
G. Ketteler, S. Yamamoto, H. Bluhm, K. Andersson, D.E. Starr, D.F. Ogletree, H. Ogasawara, A. Nilsson, M. Salmeron.
J. Phys. Chem. C. 111, 8278-8282 (2007). LBNL-60944
- 358.** *Electronic structure of cobalt nanocrystals suspended in liquid*
Hongjian Liu, Jinghua Guo, Yadong Yin, Andreas Augustsson, Chungli Dong, Joseph Nordgren, Chinglin Chang, Paul Alivisatos, Geoff Thornton, D. Frank Ogletree, Felix G. Requejo, Frank de Groot, Miquel Salmeron
Nanoletters 7, 1919-1922 (2007). LBNL- 63188
- 359.** *Manipulation and patterning of the surface hydrogen concentration on Pd(111) by means of electric fields*
T. Mitsui, E. Fomin, D.F. Ogletree, M. Salmeron, A.U. Nilekar and M. Mavrikakis
Angewandte Chemie Int. Ed. 46, 5757 (2007) LBNL-60112
- 360.** *Influence of carrier density in the friction properties of silicon pn junctions*
Jeong Y. Park, Yabing Qi, D.Frank Ogletree, P.A. Theil, Miquel Salmeron
Phys. Rev. B. 76, 064108 (2007). LBNL-63021
- 361.** *Bridging the Pressure Gap in Water and Hydroxyl Chemistry on Metal Surfaces: the Cu(110) case*
Klas Andersson, Guido Ketteler, Hendrik Bluhm, Susumu Yamamoto, Hirohito Ogasawara, Lars G. M. Pettersson, Miquel Salmeron, Anders Nilsson
J. Phys. Chem C. 111, 14493 (2007). LBNL-63400

- 362.** *Growth and structure of water on SiO₂ films on Si investigated by Kelvin probe microscopy and in situ X-ray Spectroscopies*
 A. Verdaguer, C. Weis, G. Oncins, G. Ketteler, H. Bluhm, M. Salmeron
Langmuir 23, 9699 (2007). LBNL-62353
- 363.** *Mechanical and electrical properties of CdTe tetrapods studied by atomic force microscopy*
 L. Fang, J.Y. Park, Y. Cui, P. Alivisatos, J. Shcrier, B. Lee, L-W Wang, M. Salmeron
J. Chem. Phys. 127, 184704 (2007). LBNL-62361
- 364.** *An AFM study of the mechanical and electrical properties of monolayer films of molecules with aromatic end groups*
 Liang Fang, Jeong Y. Park, H. Ma, A.K.-Y. Jen, Miquel Salmeron
Langmuir 23, 11522 (2007) LBNL-63408
- 365.** *Water adsorption on O(2x2)/Ru(0001) from STM experiments and first-principles calculations*
 Pepa Cabrera-Sanfelix, Daniel Sanchez-Portal, Aitor Mugarza, Tomoko Shimizu, Miquel Salmeron, Andres Arnau
Phy. Rev. B. 76, 205438 (2007). LBNL-63621
- 366.** *In situ x-ray photoelectron spectroscopy studies of gas/solid interfaces at near-ambient conditions*
 Hendrik Bluhm, Michael Hävecker, Axel-Knop-Gericke, Maya Kisikova, Robert Schlögl, and Miquel Salmeron
MRS Bull. 32, 1022 (2007). LBNL-63712
- 367.** *Hydrogen adsorption on Ru(001) studied by Scanning Tunneling Microscopy*
 Mous Tatarkhanov, Franck Rose, Evgeny Fomin, D. Frank Ogletree and Miquel Salmeron
Surf. Sci. 602, 487 (2008). LBNL-63781
- 368.** *Mechanical and charge transport properties of alkanethiol self-assembled monolayers on Au (111) surface: The Role of Molecular Tilt*
 Yabing Qi, Imma Ratera, Jeong Y. Park, Paul D. Ashby, Su Ying Quek, J. B. Neaton, Miquel Salmeron
Langmuir 24, 2219 (2008). LBNL-69E
- 369.** *Autocatalytic water dissociation on Cu(110) at near ambient conditions*
 Klas Andersson, Guido Ketteler, Hendrik Bluhm, Susumu Yamamoto, Hirohito Ogasawara, Lars G. M. Pettersson, Miquel Salmeron, Anders Nilsson
J. Am. Chem. Soc. 130, 2793 (2008). LBNL-99E
- 370.** *Combined Low-Temperature Scanning Tunneling / Atomic Force Microscope for Atomic Resolution Imaging and Site-Specific Force Spectroscopy*
 B.J. Albers, M. Liebmann, T.C. Schwendemann, M.Z. Baykara, M. Heyde, M. Salmeron, E.I. Altman, and U.D. Schwarz
Rev. Sci. Instr. 79, 033704 (2008). LBNL-215E
- 371.** *The nature of the dissociation sites in hydrogen molecules on Ru(001)*
 Franck Rose, Mous Tatarkhanov, Evgeni Fomin, Miquel Salmeron
J. Phys. Chem. C. 111, 19052 (2007). LBNL-193E
- 372.** *Ambient pressure photoelectron spectroscopy: A new tool for surface science and nanotechnology*
 M. Salmeron and R. Schlögl
Surf. Sci. Rep. 63, 169 (2008). LBNL-183E

- 373.** *In situ photoelectron spectroscopy study of water adsorption on model biomaterial surfaces*
 G Ketteler, P Ashby, B.S. Mun, I. Ratera, H. Bluhm, B. Kasemo, and M. Salmeron
J. Phys.: Condens. Matter. 20, 184024 (2008). LBNL-300E
- 374.** *In-situ X-ray photoelectron spectroscopy studies of water on metals and oxides at ambient conditions.*
 S Yamamoto, H Bluhm, K Andersson, G Ketteler, H Ogasawara, M Salmeron and A Nilsson.
J. Phys.: Condens. Matter. 20, 184025 (2008). LBNL-205E
- 375.** *Electronic contribution to the friction properties of GaAs*
 Yabing Qi, J.Y. Park, B. Hendriksen, D.F. Ogletree, and M. Salmeron
Phys. Rev. B. 77, (18) 184105 (2008). LBNL-268E
- 376.** *Surface species formed by the adsorption and dissociation of water molecules on Ru(0001) studied by scanning tunneling microscopy*
 Tomoko K. Shimizu, Aitor Mugarza, Jorge I. Cerdá, Markus Heyde, Yabing Qi, Udo D. Schwarz, D. Frank Ogletree, Miquel Salmeron
J. Phys. Chem. C. 112 (19), 7445-7454 (2008). LBNL-286E
- 377.** *Reactivity of Ozone with Solid Potassium Iodide Investigated by Atomic Force Microscopy*
 M.A. Brown, P.D. Ashby, D.F. Ogletree, M. Salmeron, J.C. Hemminger
J. Phys. Chem. C. (Letter). 112 (22), 8110-8113 (2008). LBNL-583E
- 378.** *Friction Anisotropy: a unique and intrinsic property of decagonal quasicrystals*
 Jeong Y. Park, D. F. Ogletree, M. Salmeron, C. J. Jenks, P. A. Thiel, J. Brenner, and J. M. Dubois
J. Mat. Res. 25 (5), 1488 (2008). LBNL-848E
- 379.** *Noncontact to contact tunneling microscopy in self-assembled monolayers of alkylthiols on gold*
 Jeong Y. Park, Yabing Qi, Imma Ratera, and M. Salmeron.
J. Chem. Phys. 128 (23) Art. 234701 (2008). LBNL-263E
- 380.** *The adsorption of water on Cu₂O and Al₂O₃ thin films*
 Xingyi Deng, Tirma Herranz, Christoph Weis, Hendrik Bluhm Miquel Salmeron
J. Phys. Chem. C. 112 (26) 9668-9672 (2008). LBNL-
- 381.** *Interactions of oxygen and hydrogen on Pd(111) surface*
 D.O. Demchenko, G.M. Sacha, M. Salmeron and L.-W. Wang
Surf. Sci. 602, 2552–2557 (2008) LBNL-929E
- 382.** *Water growth on metals and oxides: binding, dissociation and role of hydroxyl Groups*
 M. Salmeron, H. Bluhm, M. Tatarkhanov, G. Ketteler, T.K. Shimizu and A. Mugarza,
 Xingyi Deng, T. Herranz
Faraday Discussion 141, 221-229 (2009). DOI: B806516K. <http://xlink.rsc.org/?doi=B806516K>
- 383.** *Adsorption of Water on O(2 × 2)/Ru(0001): Thermal Stability and Inhibition of Dissociation*
 Aitor Mugarza, Tomoko K. Shimizu, Pepa Cabrera-Sanfelix, Daniel Sánchez-Portal, Andres Arnau, Miquel Salmeron
J. Phys. Chem. C. 112, (36) 14052 (2008). LBNL-384.
- 384.** *The surface chemistry of Cu in the presence of CO₂ and H₂O*
 Xingyi Deng, Albert Verdaguer, Tirma Herranz, Christoph Weis, Miquel Salmeron
Langmuir 24, 9474-9478 (2008). LBNL-
- 385.** *The structure of mixed H₂O-OH monolayer films on Ru(0001)*

- M. Tatarkhanov, E. Fomin, M. Salmeron, K. Andersson, H. Ogasawara, L.G.M. Pettersson, A. Nilsson, J.I. Cerdá
J. Chem. Phys. 129, 154109. (2008). DOI: 10.1063/1.2988903
- 386.** *Correlation between charge state of insulating NaCl surfaces and ionic mobility induced by water adsorption: a combined ambient pressure X-ray photoelectron spectroscopy and scanning force microscopy study.*
A. Verdaguer, H. Bluhm, M. Salmeron, J. Fraxedas and J.J. Segura
J. Phys. Chem. 112, (43) 16898 (2008).
- 387.** *Ion Partitioning at the liquid/vapor interface of a multi-component alkali halide solution: A model for aqueous sea salt aerosols*
Sutapa Ghosal, Matthew A. Brown, Maria J. Krisch, Hendrik Bluhm, Miquel Salmeron, Pavel Jungwirth, John C. Hemminger
J. Phys. Chem. A. 112, 12378 (2008)
- 388.** *Structure and Reactions of Carbon and Hydrogen on Ru(0001): A Scanning Tunneling Microscopy Study.*
Tomoko K. Shimizu, Aitor Mugarza, Jorge I. Cerdá, and Miquel Salmeron
J. Chem. Phys. C 129, 244103 (2008)
- 389.** *Decisive Role of the Energetics of Dissociation Products in the Adsorption of Water on O/Ru(0001).*
Pepa Cabrera-Sanfelix, Andrés Arnau, Aitor Mugarza, Tomoko K. Shimizu, Miquel Salmeron and Daniel Sánchez-Portal
Phys. Rev. B. 78, 155438 (2008)
- 390.** *Chemical reactions of water molecules on Ru(0001) induced by selective excitation of vibrational modes*
Aitor Mugarza, Tomoko K. Shimizu, D. Frank Ogletree, Miquel Salmeron
Surf. Science. 603, 2030 (2009)
- 391.** *Reactivity of Au nanoparticles supported over SiO₂ and TiO₂ studied by ambient pressure photoelectron spectroscopy.*
Tirma Herranz, Xingyi Deng, Andreu Cabot, Paul Alivisatos, Zhi Liu, Galo Soler-Illia and Miquel Salmeron.
Catalysis Today. 143, 158 (2009)
- 392.** *A New Scanning Tunneling Microscope Reactor Used for High Pressure and High Temperature Catalysis Studies*
Feng Tao, David Tang, Miquel Salmeron, and Gabor A. Somorjai
Rev. Sci. Instr. 79, 084101 (2008).
- 393.** *Reaction-Driven Restructuring of Rh-Pd and Pt-Pd Core-shell Nanoparticles*
Feng Tao, Michael E. Grass, Yawen Zhang, Derek R. Butcher, James R. Renzas, Zhi Liu, Jen Y. Chung, Bongjin S. Mun, Miquel Salmeron, and Gabor A. Somorjai
Science. 322, 932 (2008)
- 394.** *Photoelectron Spectroscopy under Ambient Pressure and Temperature conditions*
D. Frank Ogletree, Hendrik Bluhm, Eleonore B. Hebenstreit and Miquel Salmeron
Nucl. Instr. and Methods in Phys. Research A 600, 151-160 (2009)
- 395.** *Restructuring of hex-Pt(100) under CO gas environments: formation of small 2-D clusters*
Feng Tao, Sefa Dag, Lin-Wang Wang, Zhi Liu, Derek Butcher, Miquel Salmeron, Gabor A. Somorjai.
Nanoletters. 9 (5), 2167-2171 (2009)

396. *Influence of the Cobalt Particle Size in the CO Hydrogenation Reaction Studied by In Situ X-Ray Absorption Spectroscopy*
Tirma Herranz, Xingyi Deng, Andreu Cabot, Jingua Guo, and Miquel Salmeron
J. Phys. Chem. B. 113 (31), 10721 (2009)
397. *Ion Segregation and Deliquescence of Alkali Halide Nanocrystals on SiO₂*.
Kenta Arima, Peng Jiang, Deng-Sung Lin, Albert Verdaguer and Miquel Salmeron.
J. Phys. Chem. A. 113 (35), 9715-9720 (2009)
398. *Metal- and hydrogen-bonding competition during water adsorption on Pd(111) and Ru(0001)*.
Mouslim Tatarkhanov, D.Frank Ogletree, Franck Rose, Toshiyuki Mitsui, Evgeny Fomin, Sabine Maier, Mark Rose, Jorge I. Cerdá, Miquel Salmeron.
J. Am. Chem. Soc. 131, 18425 (2009).
399. *Break-up of Stepped Pt Catalyst Surfaces by High CO Coverage*.
Feng Tao, Zhi, Sefa Dag, Lin-Wang Wang, Zhi Liu, Derek R. Butcher, Miquel Salmeron, Gabor A. Somorjai
Science. 327, 850 (2010)
400. *Water adsorption on α-Fe₂O₃(0001) at near ambient conditions*
Susumu Yamamoto, Tom Kendelewicz, John T. Newberg, Guido Ketteler, David E. Starr, Erin R. Mysak, Klas Andersson, Hirohito Ogasawara, Hendrik Bluhm, Miquel Salmeron, Gordon E. Brown, Jr., Anders Nilsson
J. Phys. Chem. C. 114 (5), 2256–2266 (2010). DOI: 10.1021/jp909876t
401. *Sensitivity of X-ray Absorption Spectroscopy to Hydrogen Bond Topology*
D. Nordlund, H. Ogasawara, K.J. Andersson, M. Tatarkhanov, M. Salmeron, L.G.M. Pettersson, A. Nilsson
Phys. Rev. B. 80, 233404 (2009).
402. *Activation and reduction of gold: an in situ X-ray photoelectron spectroscopy study*
Peng Jiang, Soeren Porsgaard, Ferenc Borondics, Mariana Köber, Alfonso Caballero, Hendrik Bluhm, Flemming Besenbacher, Miquel Salmeron
J. Am. Chem. Soc. 132, 2858–2859 (2010).
403. *Near-ambient X-ray photoemission spectroscopy and kinetic approach to the mechanism of carbon monoxide oxidation over lanthanum substituted cobaltites*
Jose L. Hueso, D. Martinez-Martinez, Alfonso Caballero, A.R. Gonzalez-Elipe, B. Simon Mun, Miquel Salmeron.
Catalysis Communications. 10, 1898-1902 (2009)
404. *Chemical and electronic characterization of cobalt in a lanthanum perovskite. Effects of strontium substitution*
Jose L. Hueso, Juan P. Holgado, Rosa Pereiguez, Simon Mun, Miquel Salmeron, Alfonso Caballero.
J. Solid State Chem. 183, 27 (2010).
405. *In situ spectroscopic detection of SMSI effect in a Ni/CeO₂ system: hydrogen-induced burial and dig out of metallic nickel*
Alfonso Caballero, Juan P. Holgado, Victor M. Gonzalez-delaCruz, Susan E. Habas, Tirma Herranz, and Miquel Salmeron
Chem. Comm. (2010) DOI: 10.1039/b920803h
406. *Graphene Growth by Metal Etching on Ru(0001)*
E. Starodub, S. Maier, I. Stass, N.C. Bartelt, P.J. Feibelman, M. Salmeron, K.F. McCarty

- Phys. Rev. B.** 80, 235422 (2009).
- 407.** *In Situ Spectroscopic Observation of Activation and Transformation of Tantalum Suboxides*
Ke Wang, Zhi Liu, Tirma Herranz Cruz, Miquel Salmeron, and Hong Liang
J. Phys. Chem. A. 114 (7), 2489-2497 (2010). DOI: 10.1021/jp910964s
- 408.** *Influence of molecular ordering on electrical and friction properties of omega-(trans-4-stilbene) alkylthiol self-assembled monolayers on Au (111).*
Yabing Qi, Bas Hendriksen, Xiaosong Liu, Violeta Navarro, Frank Himpel, John Klopp, Carine Edder, Jeong Park, Jean Fréchet, Imma Ratera, Eugene Haller
Langmuir. 26(21) 16522-16528 (2010). DOI: 10.1021/la100837g
- 409.** *Evolution of Structure and Chemistry of Bimetallic Nanoparticle Catalysts under Reaction Conditions*
Feng Tao, Michael E. Grass, Yawen Zhang, Derek R. Butcher, Zhi Liu, Shaul Aloni, Virginia Altoe, Selim Alayoglu, James R. Renzas, Chia-Kuang Tsung, Funda Aksoy, Miquel Salmeron, and Gabor A. Somorjai
J. Am. Chem Soc. 132 (25) 8697-8703 (2010)
- 410.** *In Situ Soft X-ray Absorption Spectroscopy Investigation of Electrochemical Corrosion of Copper in Aqueous NaHCO₃ Solution*
Peng Jiang, Jeng-Lung Chen, Ferenc Borondics, Per-Anders Glans, Mark W. West, Ching-Lin Chang, Miquel Salmeron, Jinghua Guo
Electrochemistry Communications 12, 820 (2010), doi:[10.1016/j.elecom.2010.03.042](https://doi.org/10.1016/j.elecom.2010.03.042)
- 411.** *Water Induced Surface Reconstruction of the Oxygen (2x1) covered Ru(0001)*
Sabine Maier, Pepa Cabrera-Sanfelix, Ingeborg Stass, Daniel Sánchez-Portal, Andrés Arnau, and Miquel Salmeron
Phys. Rev. B. 82, 075421 (2010)
- 412.** *Steering the Self-Assembly of Octadecylamine Monolayers on Mica by Controlled Mechanical Energy Transfer from the AFM Tip*
Jose Benitez, Jose A. Heredia-Guerrero, Miquel Salmeron
J. Phys. Chem. C. 114 (29), 12630-12634 (2010)
- 413.** *Water adsorption, solvation and deliquescence of alkali halide thin films on SiO₂ studied by ambient pressure X-ray photoelectron spectroscopy*
Kenta Arima, Peng Jiang, Xingyi Deng, Hendrik Bluhm, Miquel Salmeron
J. Phys. Chem. C. 114, (35), 14900–14906 (2010).
- 414.** *Nonlinear photoluminescence from graphene*
Wei-Tao Liu, S.W. Wu, P.J. Schuck, M. Salmeron, Y.R. Shen, and F. Wang
Phys. Rev. B. 82, 081408R (2010).
- 415.** *Multilayered Nanofibers from Stacks of Single-Molecular Thick Nanosheets of Hexakis(alkoxy)triphenylenes*
Gayane Koshkakaryan, Peng Jiang, Shaul Aloni, Virginia Altoe, Dennis Cao, Liana M. Klivansky, Miquel Salmeron, Yi Liu
Chem. Com. 46, (45) 8579-8581 (2010). DOI: 10.1039/C0CC03942J
- 416.** *Sensing Current and Forces with SPM*
Jeong Y. Park, Sabine Maier, Bas Hendriksen, and Miquel Salmeron
Materials Today. 13 (10), 37-44 (2010)
- 417.** *Domain Wall Conductivity in La-doped BiFeO₃*

- J. Seidel, P. Maksymovych, Y. Batra, A. Katan, S.-Y. Yang, Q. He, A. P. Baddorf, S.V. Kalinin, C.-H. Yang, J.-C. Yang,⁷ Y.-H. Chu, E.K.H. Salje, H. Wormeester, M. Salmeron, and R. Ramesh
Phys. Rev. Letters. 105, 197603 (2010)
- 418.** *Formation of hydroxyl and water layers for MgO(100) films studied with ambient pressure XPS*
 J.T. Newberg, D.E. Starr, S. Yamamoto, S. Kaya, T. Kendelewicz, E.R. Mysak, S. Porsgaard, M.B. Salmeron, G.E. Brown Jr., A. Nilsson, H. Bluhm
Surf. Sci. 605, 89-94 (2011)
- 419.** *In Situ Studies of Chemistry and Structure of Materials in Reactive Environments*
 Franklin (Feng) Tao and Miquel Salmeron
Science. 331, 171-174 (2011)
- 420.** *Charge state of TiO₂ supported Au nanoparticles at high O₂ pressure*
 Soeren Porsgaard, Peng Jiang, Ferenc Borondics, Stefan Wendt, Hendrik Bluhm, Flemming Besenbacher, Miquel Salmeron.
Angewandte Chemie Intl. 123, 2266-2269 (2011). doi: 10.1002/ange.201005377
- 421.** *Hyperspectral Nanoscale Imaging on Dielectric Substrates with Coaxial Optical Antenna Scan Probes.*
 Alexander Weber-Bargioni, Adam Schwartzberg, Matteo Cornaglia, Ariel Ismach, Jeff Urban, YuanJie Pang, Reuven Gordon, Jeff Bokor, Miquel Salmeron, D. Frank Ogletree, Stefano Cabrini, P. James Schuck
Nanoletters. 11, (3) 1201-1207 (2011).
- 422.** *Friction Anisotropy-driven Domain Imaging on Exfoliated Monolayer Graphene*
 Jin Sik Choi, Jin-Soo Kim, Ik-Su Byun, Duk Hyun Lee, Mi Jung Lee, Bae Ho Park, Changgu Lee, Duhee Yoon, Hyeonsik Cheong, Ki Ho Lee, Young-Woo Son, Jeong Young Park, Miquel Salmeron
Science. 333 (6042) 607-610 (2011)
- 423.** *CO-induced embedding of Pt adatoms in a partially-reduced FeOx film on Pt(111)*
 Lindsay R. Merte, Jan Knudsen, Falk M. Eichhorn, Soeren Porsgaard, Helene Zeuthen, Lars C. Grabow, Erik Lægsgaard, Hendrik Bluhm, Miquel Salmeron, Manos Mavrikakis and Flemming Besenbacher.
J. Am. Chem. Soc. 133 (28) 10692-10695 (2011). DOI: 10.1021/ja2015923
- 424.** *Auto-catalytic surface hydroxylation of MgO(100) terrace sites observed under ambient conditions*
 John T. Newberg, David E. Starr, Susumu Yamamoto, Sarp Kaya, Tom Kendelewicz, Erin, R. Mysak, Soeren Porsgaard, Miquel B. Salmeron, Gordon E. Brown, Jr., Anders Nilsson, Hendrik Bluhm
J. Phys. Chem. C. 115, 12864-12872 (2011). DOI: 10.1021/jp200235v
- 425.** *Ambient pressure photoelectron spectroscopy of NO and O₂ on gold nanoparticles deposited on TiO₂ and SiO₂ thin films.*
 Tirma Herranz, Xingyi Deng, Andreu Cabot, Zhi Liu, Miquel Salmeron
J. of Catalysis. 283, 119–123 (2011)
- 426.** *Electrical transport properties of penta-thiophene based molecular films studied by current sensing AFM.*
 Bas L. M. Hendriksen, Florent Martin, Yabing Qi, Clayton Mauldin, Nenad Vukmirovic, JunFeng Ren,| Herbert Wormeester, Allard J. Katan, Virginia Altoe, Shaul Aloni, Jean M. J. Fréchet, Lin-Wang Wang, and Miquel Salmeron
Nano Letters. 11 (10), 4107–4112 (2011). DOI: 10.1021/nl202720y

- 427.** *Structure and Chemical State of Octadecylamine Self-Assembled Monolayers on Mica*
J.J. Benítez, M A. San-Miguel, S. Domínguez-Meister, J. A. Heredia-Guerrero, and M. Salmeron
J. Phys. Chem. C 115, 19716–19723 (2011). dx.doi.org/10.1021/jp203871g
- 428.** *Shape changes of Pt nanoparticles induced by deposition on mesoporous silica (SBA-15) monitored by SAXS and EXAFS techniques.*
Lisandro J. Giovanetti, José M. Ramallo-López, Mike Foxe, Louis C. Jones, Matthias M. Koebel, Gabor A. Somorjai, Aldo F. Craievich, Miquel S. Salmeron, and Félix G. Requejo
Small. In press (2011). DOI: 10.1002/smll.201101293
- 429.** *Fabrication of ultra-flat coplanar electrodes for contacting molecular monolayers*
Florent Martin, Bas Hendriksen, Allard Katan, Imma Ratera, Yabing Qi, Bruce Harteneck, Alex Liddle, Miquel Salmeron.
Rev. Scient. Instrum. 82, 123901 (2011); doi: 10.1063/1.3664789
- 430.** *Water-molecule arrangements on Ru(0001) and Pd(111) - a new twist*
S. Maier, I. Stass, T. Mitsui, M. Tatarkhanov, Peter J. Feibelman, K. Thürmer, N. C. Bartelt and M. Salmeron
Phys. Rev. B. Accepted.
- 431.** *Imaging physical phenomena with local probes – from electrons to photons*
Dawn A. Bonnell, D. N. Basov, Matthias Bode, Ulrike Diebold, Sergei V. Kalinin, Vidya Madhavan, Lukas Novotny, Miquel Salmeron, Udo D. Schwarz, Paul S. Weiss
Rev. Modern Physics (2012)